

# Ground-Water Levels in the United States 1956-57

## Northeastern States

*Prepared under the direction of PHILIP E. LAMOREAUX, Chief, Ground Water Branch*

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GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1537

*Prepared in cooperation with the States  
of Connecticut, Delaware, Indiana,  
Massachusetts, Michigan, New Jersey,  
New York, Ohio, Pennsylvania, and  
Rhode Island, and with other agencies*



UNITED STATES DEPARTMENT OF THE INTERIOR

FRED A. SEATON, *Secretary*

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GROUND-WATER LEVELS IN  
THE UNITED STATES  
1956-57

**NORTHEASTERN STATES**

**INTRODUCTION**

By Philip E. LaMoreaux

Publication of water levels in the United States in the annual series of water-supply papers was begun by the Geological Survey in 1935. From 1935 through 1939, 5 volumes were issued as Water-Supply Papers 777, 817, 840, 845, and 886. From 1940 through 1955, 6 volumes were published annually, each for a separate section of the United States as shown in figure 1. The following table gives the numbers of water-supply papers by year and section.

Year	North-eastern (1)	South-eastern (2)	North-central (3)	South-central (4)	North-western (5)	South-western (6)
1940	906	907	908	909	910	911
1941	936	937	938	939	940	941
1942	944	945	946	947	948	949
1943	986	987	988	989	990	991
1944	1016	1017	1018	1019	1020	1021
1945	1023	1024	1025	1026	1027	1028
1946	1071	1072	1073	1074	1075	1076
1947	1096	1097	1098	1099	1100	1101
1948	1126	1127	1128	1129	1130	1131
1949	1156	1157	1158	1159	1160	1161
1950	1165	1166	1167	1168	1169	1170
1951	1191	1192	1193	1194	1195	1196
1952	1221	1222	1223	1224	1225	1226
1953	1265	1266	1267	1268	1269	1270
1954	1321	1322	1323	1324	1325	1326
1955	1404	1405	1406	1407	1408	1409
1956	....	....	1455	....	....	....

The program begun in 1956 provides for the publication of 5 years of record in 1 volume for each geographic section. During a 4-year transitional period, however, 4 of the volumes will not contain 5 years of record, as shown in the following schedule:

- North-central:      1956, 1957-61, 1962-66, etc.  
Northeastern:      1956-57, 1958-62, 1963-67, etc.  
Southeastern:      1956-58, 1959-63, 1964-68, etc.  
South-central:      1956-59, 1960-64, 1965-69, etc.  
Northwestern:      1956-60, 1961-65, 1966-70, etc.  
Southwestern:      1956-60, 1961-65, 1966-70, etc.

Moreover, beginning in 1956, only water-level data from a basic network of observation wells will be published. The minimum basic network provides observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers. In some States the basic network forms the skeletal index of a more comprehensive observation-well program. Publications that contain substantial additional water-level data are listed at the end of each State report in this volume.

Water-level measurements in this report are given in feet with reference to either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a precise datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. A plus sign (+) is placed before a measurement if the level is above the plane of reference. Measurements of water levels in wells equipped with recording gages are given for every fifth day and the end of each month (eom).

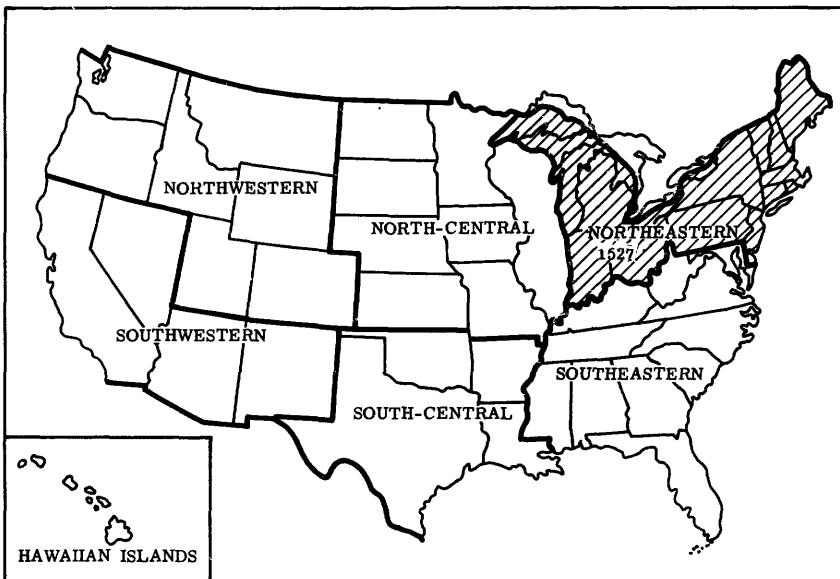


Figure 1. -Outline map of the United States showing States included in this volume.

In the collection of water-level data to serve the objectives of the observation-well program, the problem generally is to measure changes in water level accurately, rather than to determine the absolute position of the water surface. Because the measurements are made in many types of wells, under varying conditions of access and at different temperatures, neither the method of measuring nor the equipment can be standardized. At each observation well, however, the best possible combination of measuring technique and equipment is selected, and so long as it is not changed the measurements at each well will be consistent.

Water levels are reported to as many significant figures as can be justified by the local conditions and the end use of the information. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, in view of the principal use to which the data are put, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

Measurements were made under the direction of the district supervisors of the Ground Water Branch in the several States.

## CONNECTICUT

By A. M. LaSala, Jr.

The observation-well program in Connecticut was continued during 1956 and 1957 in cooperation with the State Water Resources Commission. Figure 2 shows the location of observation wells whose measurements are listed in this report.

### Well-Numbering System

Wells are designated by abbreviations derived from town names and by serial numbers. For example, well Pl 1, in the town of Plainfield, was the first well inventoried in that township.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum except in the city of New Haven, where they are above or below mean sea level. A plus sign before the measurement indicates that it is above mean sea level.

#### Hartford County

EG 35. Town of East Granby. Holcomb St. and State Route 9. Lat  $41^{\circ}55'35''$ , long  $72^{\circ}44'05''$ . Drilled unused water-table well in arkose of Triassic age, diam 6 in, reported depth 125 ft, cased to 60. Lsd, about 200 ft above msl. MP, top of casing, 4.90 ft below lsd. Highest water level 25.85 below lsd, Nov. 10, 1955; lowest 37.50 below lsd, Sept. 30, 1957. Records available: 1955-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 10, 1955	30.14	May 1, 1956	26.97	Oct. 31, 1956	34.47	June 2, 1957	32.18
Nov. 10	25.85	June 1	28.32	Dec. 1	34.33	Aug. 13	35.73
Dec. 9	26.17	July 1	31.67	Jan. 1, 1957	31.95	31	35.16
Jan. 11, 1956	29.32	Aug. 1	31.80	Feb. 1	31.71	Sept. 30	37.50
Feb. 10	29.11	18	33.24	28	31.77	Nov. 2	37.20
Mar. 9	29.09	Sept. 1	33.24	Apr. 1	30.70	Dec. 2	36.63
Apr. 4	28.07	Oct. 2	33.84	30	29.87		

M 84. George Bryan. 179 Tolland Turnpike, Manchester. Lat  $41^{\circ}48'45''$ , long  $72^{\circ}30'45''$ . Dug unused water-table well in glacial sand and gravel, diam 32 in, depth 16 ft, lined with brick. Lsd, about 180 ft above msl. MP, top of curbing, at lsd. Highest water level 9.65 below lsd, Aug. 22, 1955; lowest 15.20 below lsd, Oct. 27, 1949. Records available: 1934-35, 1948-57. For additional measurements, see Leggette and others (1938, 1940).

Jan. 31, 1956	14.44	Aug. 31, 1956	14.86	Feb. 28, 1957	13.97	July 31, 1957	14.95
Feb. 29	13.48	Sept. 28	14.90	Apr. 1	13.48	Aug. 29	14.97
Mar. 31	11.91	Oct. 31	14.97	30	13.38	Sept. 27	15.11
Apr. 28	12.88	Dec. 1	14.50	May 5	13.69	Nov. 1	15.13
May 29	13.97	Jan. 1, 1957	12.12	June 2	14.44	30	14.78
June 27	14.31	Feb. 1	13.47	28	14.71	Dec. 31	11.37
July 31	14.59						

RH 44. Charles Yeager. 1 Pratt St., Rocky Hill. Lat  $41^{\circ}39'40''$ , long  $72^{\circ}38'20''$ . Drilled unused water-table well in sedimentary rocks of Triassic age, diam 6 in, depth 125 ft, cased to 110. Lsd, about 120 ft above msl. MP, top of casing, 0.60 ft above lsd. Highest water level 44.96 below lsd, Nov. 29, 1955; lowest 50.04 below lsd, Nov. 1, 1957. Records available: 1954-57.

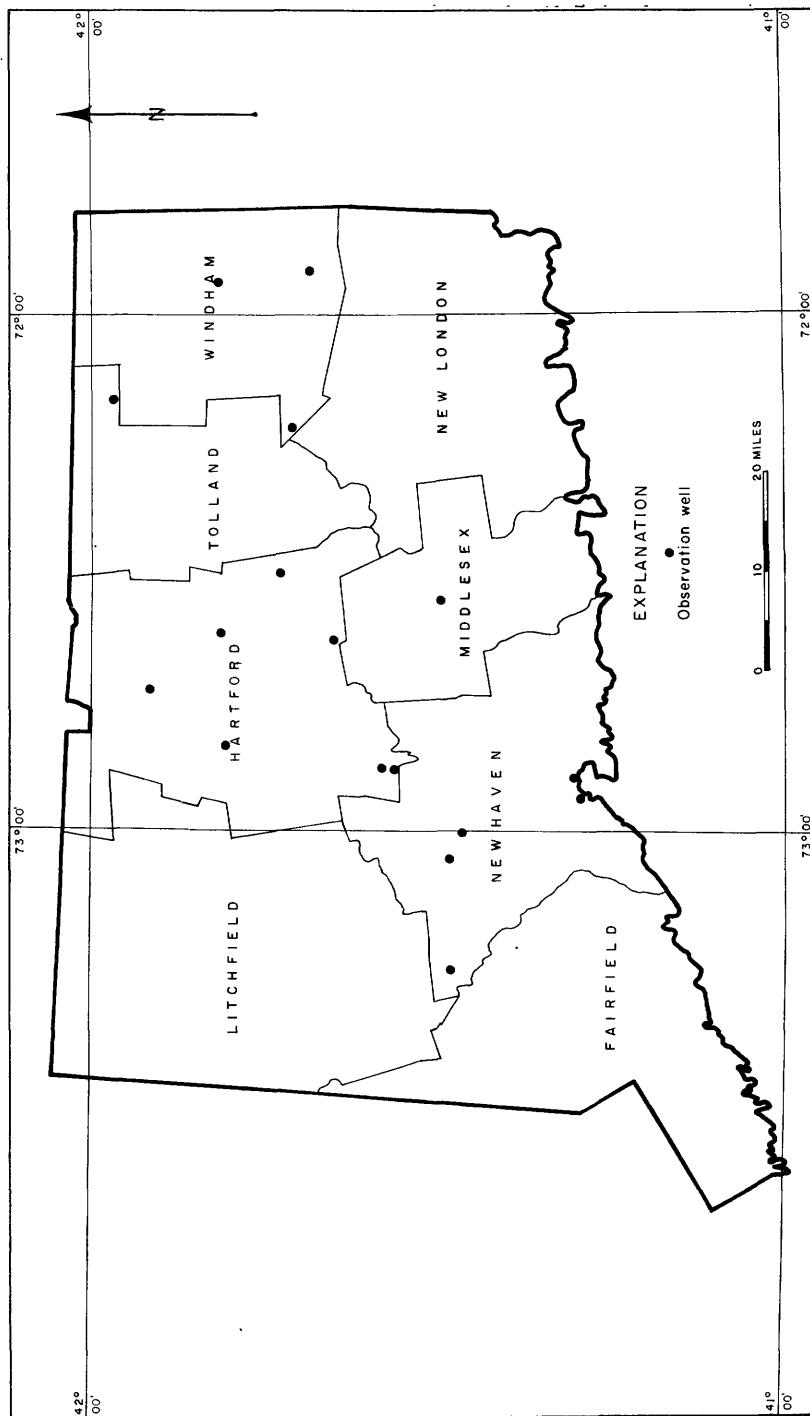


Figure 2.--Location of observation wells in Connecticut, 1956-57.

## RH 44--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 29, 1954	47.55	June 24, 1955	46.91	Mar. 31, 1956	45.55	Mar. 26, 1957	45.70
Sept. 2	47.83	July 26	47.43	Apr. 28	45.30	Apr. 30	45.66
29	46.93	Aug. 22	47.22	May 29	45.62	June 2	46.80
Nov. 27	46.59	27	47.10	June 27	45.86	July 31	48.55
Dec. 28	46.13	Sept. 28	46.86	July 31	46.33	Sept. 1	49.50
Jan. 29, 1955	46.08	Oct. 29	45.75	Aug. 31	47.38	25	49.93
Feb. 25	46.21	Nov. 29	44.96	Nov. 1	47.90	Nov. 1	50.04
Mar. 31	45.90	Dec. 31	45.49	Dec. 1	47.60	30	49.37
Apr. 30	45.77	Jan. 31, 1956	46.05	Feb. 2, 1957	46.80	Dec. 31	47.87
May 28	46.36	Feb. 29	45.94	28	46.78		

S 16. Mrs. Stephan Suchar. West Center St. Extension, Southington. Lat  $41^{\circ}35'30''$ , long  $72^{\circ}53'20''$ . Drilled domestic water-table well in New Haven arkose, diam 6 in, depth 95 ft. Lsd, about 210 ft above msl. MP, top of concrete tile enclosing well, 2.00 ft above lsd. Highest water level 5.57 below lsd, Mar. 6, 1957; lowest 14.26 below lsd, Nov. 7, 1957. Records available: 1956-57.

Aug. 3, 1956	8.74	May 6, 1957	6.41	Sept. 6, 1957	12.85	Nov. 7, 1957	14.26
10	9.20	June 4	7.66	Oct. 9	13.82	Dec. 6	12.30
Mar. 6, 1957	5.57	July 5	9.76				

S 96. Robert Brayfield. South End Rd., Southington. Lat  $41^{\circ}34'45''$ , long  $72^{\circ}52'30''$ . Dug unused water-table well in glacial sand and gravel, diam 24 in, depth 11 ft, lined with field stones. Lsd, about 120 ft above msl. MP, top of concrete curbing, at lsd. Highest water level 6.77 below lsd, Mar. 6, 1957; lowest 8.93 below lsd, Sept. 6, 1957. Records available: 1956-57.

Aug. 3, 1956	8.38	Mar. 6, 1957	6.77	July 5, 1957	8.30	Nov. 7, 1957	8.84
10	8.81	May 6	7.19	Sept. 6	8.93	Dec. 6	7.57
Feb. 5, 1957	7.87	June 5	7.88	Oct. 9	8.66		

Si 45. Charles Rowe. College Highway, Weatogue, Simsbury. Lat  $41^{\circ}49'45''$ , long  $72^{\circ}50'15''$ . Dug unused water-table well in glacial gravel, diam 36 in, depth 15 ft, lined with stone. Lsd, about 200 ft above msl. MP, top of 1-in pipe projecting through concrete cover, 1.30 ft above lsd. Highest water level 7.92 below lsd, Nov. 10, 1955; dry, Dec. 14, 1936, Nov. 2, Dec. 2, 1957. Records available: 1934-39, 1948, 1953-57. For additional measurements, see Leggette and others (1938, 1940).

Nov. 18, 1948	11.20	Jan. 9, 1955	11.45	Apr. 4, 1956	10.66	Feb. 1, 1957	12.55
July 22, 1953	11.63	Mar. 28	11.06	May 1	10.35	28	12.61
Sept. 28	13.05	July 19	12.67	June 1	11.15	Apr. 1	12.44
Oct. 19	13.20	Aug. 31	8.21	July 1	11.77	30	11.80
Nov. 12	13.38	Oct. 11	10.18	Aug. 1	12.24	June 2	12.47
Dec. 16	12.68	Nov. 10	7.92	Sept. 1	12.90	Aug. 13	13.73
Mar. 3, 1954	12.62	Dec. 9	9.65	Oct. 2	13.37	31	13.97
May 17	12.13	Jan. 11, 1956	10.75	31	13.77	Sept. 30	14.32
July 8	12.68	Feb. 10	10.90	Dec. 1	13.60	Nov. 2	(f)
Aug. 10	13.20	Mar. 9	10.63	Jan. 1, 1957	12.66	Dec. 2	(f)
Sept. 8	13.42						

f Dry.

SW 64. H. F. Church. Station 37, South Windsor. Lat  $41^{\circ}49'$ , long  $72^{\circ}37'30''$ . Dug unused water-table well in glacial sand, diam 24 in, depth 18 ft, lined with brick. Lsd, about 40 ft above msl. MP, top edge of hole in flagstone cover, 0.50 ft above lsd. Highest water level 7.15 below lsd, Mar. 30, 1936; lowest 14.09 below lsd, Nov. 30, 1957. Records available: 1934-39, 1948-57. For additional measurements, see Leggette and others (1938, 1940).

Jan. 31, 1956	10.40	July 31, 1956	11.57	Feb. 1, 1957	11.92	July 31, 1957	13.07
Feb. 29	9.79	Aug. 31	12.27	28	12.00	Aug. 29	13.43
Mar. 31	9.41	Sept. 28	12.68	Apr. 1	11.74	Sept. 27	13.75
Apr. 28	8.90	Oct. 31	12.90	30	11.02	Nov. 1	13.99
May 29	9.98	Dec. 1	12.95	June 1	11.96	30	14.09
June 27	10.85	Jan. 1, 1957	12.07	28	12.58	Dec. 31	13.47

Middlesex County

Mt 261. U. S. Government. Nuclear Engine Laboratory, Middletown. Lat  $41^{\circ}30'$ , long  $72^{\circ}33'55''$ . Dug unused water-table well in glacial sand and gravel, diam 36 in, depth 30 ft, lined with field stones. Lsd, about 145 ft above msl. MP, top of stone cover, at lsd. Highest water level 18.32 below lsd, Apr. 5, 1956; dry, Dec. 2, 1957. Records available: 1956-57.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

## Mt 261--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 5, 1956	18.32	Oct. 4, 1956	25.08	Mar. 2, 1957	19.45	Aug. 31, 1957	25.07
May 4	19.12	Nov. 1	26.42	29	19.19	Sept. 25	26.43
June 1	20.00	29	27.39	Apr. 29	19.21	Nov. 1	28.58
29	20.39	Dec. 20	26.75	June 3	20.51	Dec. 2	(f)
Aug. 2	21.48	Jan. 3, 1957	19.83	July 1	21.57	31	19.66
30	22.97	Feb. 2	19.77	Aug. 3	23.28		

f Dry.

New Haven County

Na 11. Naugatuck Water Co. Beacon Valley Rd., Naugatuck. Lat  $41^{\circ}28'$ , long  $73^{\circ}00'40''$ . Driven unused water-table well in glacial sand and gravel, diam 2 in, depth 78 ft (previously reported as 36). Lsd, about 340 ft above msl. MP, top of casing, at lsd. Highest water level 3.00 below lsd, Apr. 1, 1953; lowest 21.24 below lsd, July 30, 1957. Records available: 1946-57.

Jan. 30, 1956	5.28	July 30, 1956	18.65	Jan. 31, 1957	20.83	July 30, 1957	21.24
Feb. 27	5.01	Aug. 30	19.82	Mar. 1	7.27	Aug. 30	20.07
Mar. 30	4.52	Sept. 26	17.04	30	5.88	Sept. 26	19.75
Apr. 27	4.52	Oct. 29	20.22	Apr. 29	5.40	Oct. 30	19.46
May 28	5.06	Nov. 30	20.38	June 1	14.63	Nov. 29	19.85
June 27	14.38	Dec. 31	19.83	27	19.17	Dec. 30	6.69

NHn 131. New Haven Clock Co. 133 Hamilton St., New Haven. Lat  $41^{\circ}18'30''$ , long  $72^{\circ}54'45''$ . Driven unused water-table well in glacial sand, diam 2 1/2 in, depth 40 ft. Lsd, 17.23 ft above msl. MP, top of casing, 16.59 ft above msl. Highest water level 0.24 above msl, May 28, July 27, 1956; lowest 5.65 below msl, May 26, 1944. Records available: 1939-57. Nearby well being pumped.

Jan. 30, 1956	0.10	July 27, 1956	+0.24	Jan. 31, 1957	+0.03	July 30, 1957	0.49
Feb. 27	.13	Aug. 30	.05	Mar. 1	.14	Aug. 30	.56
Mar. 29	+.03	Sept. 27	.10	29	.42	Sept. 26	.64
Apr. 27	+.15	Oct. 29	.20	Apr. 29	.20	Oct. 30	.69
May 28	+.24	Nov. 30	.31	June 3	.31	Nov. 29	.69
June 27	+.09	Dec. 29	.09	27	.49	Dec. 30	.39

NHn 183. Frank X. Hald Storage Co. 370-376 Davenport Ave., New Haven. Lat  $41^{\circ}18'00''$ , long  $72^{\circ}56'45''$ . Driven unused water-table well in glacial sand and gravel, diam 2 in, depth 24 ft. Lsd, 23.94 ft above msl. MP, top of casing, 17.94 ft above msl. Highest water level 7.06 above msl, Apr. 27, 1953; lowest 2.67 above msl, Dec. 3, 1941. Records available: 1939-57.

Jan. 30, 1956	+5.51	July 27, 1956	+5.24	Jan. 31, 1957	+5.23	July 30, 1957	+4.45
Feb. 27	+5.61	Aug. 30	+4.86	Mar. 1	+5.25	Aug. 30	-4.05
Mar. 29	+5.80	Sept. 27	+4.71	29	+5.24	Sept. 26	+3.79
Apr. 27	+6.05	Oct. 29	+4.71	Apr. 29	+5.61	Oct. 30	+3.56
May 28	+6.04	Nov. 30	+4.76	June 3	+5.26	Nov. 29	+3.42
June 27	+5.66	Dec. 29	+5.21	27	+4.85	Dec. 30	+4.05

Sb 1. Francis Bower. Southbury. Near South Britain. Lat  $41^{\circ}28'50''$ , long  $73^{\circ}15'30''$ . Dug unused water-table well in glacial sand and gravel, diam 24 in, depth 23 ft, lined with stone. Lsd, about 190 ft above msl. MP, top edge of hole in cover, 0.37 ft above lsd. Highest water level 9.66 below lsd, Nov. 28, 1955; lowest 18.40 below lsd, Oct. 14, 1916. Records available: 1913-16, 1944-57. For additional measurements, see Meinzer and Stearns (1929).

Jan. 30, 1956	10.95	July 30, 1956	13.35	Jan. 31, 1957	14.78	July 30, 1957	16.55
Feb. 27	11.36	Aug. 30	14.25	Mar. 1	14.97	Aug. 30	16.78
Mar. 30	11.40	Sept. 26	14.45	30	14.83	Sept. 26	16.89
Apr. 27	11.57	Oct. 29	14.55	Apr. 29	15.24	Nov. 29	16.69
May 28	12.11	Nov. 30	14.46	June 1	15.29	Dec. 30	15.64
June 27	12.67	Dec. 31	14.18	27	15.66		

Wb 93. Mrs. William Nichols, Sr. 118 Pearl Lake Rd., Waterbury. Lat  $41^{\circ}31'30''$ , long  $73^{\circ}02'30''$ . Dug unused water-table well in glacial gravel, diam 4 ft, depth 33 ft, lined with stone. Lsd, about 320 ft above msl. MP, bottom edge of flagstone at northwest corner of well, at lsd. Highest water level 23.99 below lsd, Apr. 1, 1953; lowest 28.50 below lsd, Aug. 30, Sept. 26, 1957. Records available: 1944-57.

Jan. 30, 1956	27.48	July 30, 1956	27.96	Jan. 31, 1957	27.37	July 30, 1957	28.35
Feb. 27	26.93	Aug. 30	28.14	Mar. 1	27.39	Aug. 30	28.50
Mar. 30	26.44	Sept. 26	28.13	30	27.09	Sept. 26	28.50
Apr. 27	26.50	Oct. 29	28.18	Apr. 29	26.60	Oct. 30	28.29
May 28	27.14	Nov. 30	27.80	June 1	27.63	Nov. 29	27.76
June 27	27.51	Dec. 31	26.92	27	28.00	Dec. 30	25.68

## CONNECTICUT, WINDHAM COUNTY

7

Tolland County

U 3. Yale University Forest. Union. Lat 41°57'40", long 72°09'45". Dug unused water-table well in glacial till, diam 36 in, depth 25 ft, lined with stone. Lsd, about 780 ft above msl. MP, top south side of curbing, at lsd. Highest water level 9.34 below lsd, Mar. 31, 1953; dry, Dec. 1, 1949, Sept. 27, Nov. 1, 30, 1957. Records available: 1946-57.

Date	Water level						
Jan. 30, 1956	18.20	Aug. 31, 1956	20.83	Feb. 28, 1957	20.04	July 30, 1957	21.49
Feb. 29	17.79	Sept. 28	21.97	Apr. 1	17.52	Aug. 29	22.99
Mar. 31	16.56	Oct. 31	23.32	May 30	16.04	Sept. 27	(f)
Apr. 28	12.63	Dec. 1	24.22	June 5	16.53	Nov. 1	(f)
May 29	15.83	Jan. 1, 1957	23.29	July 3	18.35	Sept. 30	(f)
June 27	17.02	Feb. 1	21.43	Aug. 28	19.75	Dec. 31	23.61
July 31	19.23						

f Dry.

Windham County

Bk 41. Richard Brouillard. Darby and Barrett Hill Rds., Brooklyn. Lat 41°49'15", long 71°56'20". Drilled unused water-table well in crystalline rock, diam 6 in, depth 109 ft. Lsd, about 330 ft above msl. MP, top of steel casing, 1.15 ft above lsd. Highest water level 9.52 below lsd, Apr. 1, 1957; lowest 27.61 below lsd, Nov. 1, 1957. Records available: 1957.

Apr. 1, 1957	9.52	June 28, 1957	13.79	Sept. 27, 1957	17.60	Nov. 30, 1957	16.77
30	9.79	July 31	15.39	Nov. 1	27.61	Dec. 31	9.90
June 3	11.97	Aug. 29	16.54				

Pl 1. W. P. Lewis. Pleasant St., Plainfield. Lat 41°40'50", long 71°55'20". Dug unused water-table well in glacial sand and gravel, diam 36 in, depth 34 ft, lined with stone. Lsd, about 180 ft above msl. MP, top of stone well curb, at lsd. Highest water level 27.24 below lsd, Apr. 28, 1953; lowest 32.34 below lsd, Nov. 5, 8, 10, 1957. Records available: 1942-57.

Jan. 30, 1956	29.50	Apr. 28, 1956	27.99	July 31, 1956	30.30	Oct. 31, 1956	31.26
Feb. 29	29.07	May 29	28.89	Aug. 31	30.86	Dec. 1	31.17
Mar. 31	28.75	June 30	29.70	Sept. 28	31.14		

Noon water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	30.20	30.05	30.05	29.83	28.93	29.87	30.69	e31.36	31.86	32.17	32.34	32.26
10	30.12	30.01	30.04	29.64	29.09	30.01	30.81	e31.46	e31.92	32.21	e32.34	32.24
15	30.09	29.99	30.03	29.25	29.27	30.15	30.93	e31.55	e31.98	e32.25	32.32	32.05
20	30.13	30.00	29.97	28.90	29.43	30.29	31.04	e31.64	e32.03	e32.29	e32.31	31.89
25	30.09	30.06	29.94	28.75	29.57	30.43	31.15	31.73	e32.09	e32.31	e32.30	31.72
End	30.04	30.08	29.88	28.78	29.75	30.57	31.26	31.81	32.12	e32.33	32.29	31.49

e Estimated.

Wil 1. American Thread Co. 322 Main St., Willimantic. Lat 41°42'30", long 72°12'15". Drilled unused water-table well in crystalline bedrock, diam 6 in, depth 83 ft. Lsd, about 190 ft above msl. MP, bottom of opening in side of casing, at lsd. Highest water level 4.52 below lsd, Mar. 31, 1953; lowest 8.90 below lsd, Oct. 27, 1947. Records available: 1946-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31, 1956	7.03	July 31, 1956	7.26	Feb. 1, 1957	6.91	July 31, 1957	8.22
Feb. 29	6.46	Aug. 31	7.80	28	6.87	Aug. 29	8.34
Mar. 31	5.55	Sept. 28	7.61	Apr. 1	6.72	Sept. 27	8.42
Apr. 28	5.74	Oct. 31	7.67	30	6.46	Nov. 1	8.49
May 29	6.60	Dec. 1	7.54	June 3	7.24	30	7.95
June 30	7.70	Jan. 1, 1957	6.70	28	7.74	Dec. 31	6.41

References

Meinzer, O. E., and Stearns, N. D., 1929, A study of ground water in the Pomperaug Basin, Connecticut: U. S. Geol. Survey Water-Supply Paper 597-B.

Works Progress Administration for Connecticut, 1938, Records of wells, springs, and ground-water levels in the towns of Bridgeport, Easton, Fairfield, Stratford, and Trumbull, Connecticut: Connecticut Ground Water Survey Bull. GW-1 (mimeo.).

1938, Records of wells, springs, and ground-water levels in the towns of Branford, Chester, Clinton, Essex, Guilford, Haddam, Killingworth, Madison, North Branford, Old Saybrook, Saybrook, and Westbrook, Connecticut: Connecticut Ground Water Survey Bull. GW-2 (mimeo.).

## References--Continued.

- 1938, Records of wells, springs, and ground-water levels in the towns of Bethany, East Haven, Hamden, Milford, North Haven, Orange, West Haven, and Woodbridge, Connecticut: Connecticut Ground Water Survey Bull. GW-3 (mimeo.).
- 1938, Records of wells, springs and ground-water levels in the towns of Berlin, Cromwell, Durham, Meriden, Middlefield, Middletown, Portland, and Wallingford, Connecticut: Connecticut Ground Water Survey Bull. GW-4 (mimeo.).
- 1938, Records of wells, springs, and ground-water levels in the towns of Colchester, East Haddam, East Hampton, East Lyme, Lyme, New London, Old Lyme, and Waterford, Connecticut: Connecticut Ground Water Survey Bull. GW-5 (mimeo.).
- 1938, Ground-water levels in north-central Connecticut, Oct. 1, 1934, to Dec. 31, 1937: Connecticut Ground Water Survey Bull. GW-6 (mimeo.).
- 1940, Ground-water levels in Connecticut, Jan. 1, 1938, to Oct. 31, 1939: Connecticut Ground Water Survey Bull. GW-7 (typewritten).

## DELAWARE

By O. J. Coskery

The observation-well program in Delaware was continued in 1956-57 in cooperation with the State Geological Survey. Figure 3 shows the location of observation wells included in this report.

### Well-Numbering System

In Sussex County, each well number consists of a two-letter symbol and a serial number. The letter symbol refers to the coordinate system used to identify the 5-minute quadrangles of latitude and longitude, as shown in figure 3. The quadrangles are lettered north to south with uppercase letters and west to east with lowercase letters. Within the quadrangles, the wells are numbered in the order they are scheduled.

In Kent and New Castle Counties, the quadrangles are divided into 25 one-minute blocks, numbered from north to south in series of tens from 10 to 50 and from west to east in units from 1 to 5. A well in one of these blocks would be designated by an uppercase letter, a lowercase letter, and a two-digit number followed by a hyphen and the serial number--for example, Gc 52-1.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum unless otherwise indicated.

#### Kent County

Hc 32-1. Formerly Hc 1. Town of Clayton. Lat  $39^{\circ}17'$ , long  $75^{\circ}38'$ . Jetted unused artesian well in sand of Eocene age, diam 4 in, depth 204 ft, cased to 115. Lsd, about 45 ft above msl. MP, top of casing, 0.65 ft above lsd. Highest water level 18.33 below lsd, Apr. 30, 1953; lowest 39.30 below lsd, Dec. 1, 1953. Records available: 1950, 1952-57. Affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	25.51	May 31, 1956	26.38	Sept. 28, 1956	c41.65	May 7, 1957	27.66
31	25.90	June 28	c42.17	Nov. 2	34.53	July 1	c35.59
Mar. 5	26.72	Aug. 3	c43.29	30	29.22	Sept. 27	c51.55
Apr. 2	26.11	Sept. 4	c39.94	Mar. 1, 1957	29.40	Dec. 2	33.02
30	25.95						

c Nearby well being pumped.

Ic 11-1. Formerly Ic 4. State Highway Dept. Near Kenton. Lat  $39^{\circ}14'$ , long  $75^{\circ}39'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 12 ft, well point 9-12. Lsd, 49 ft above msl (previously reported as lsd, about 60 ft above msl). MP, top of casing, 1.00 ft above lsd. Highest water level 2.44 below lsd, May 1, 1952; lowest 6.22 below lsd, July 28, 1955. Records available: 1950-57.

Jan. 3, 1956	5.77	May 31, 1956	5.18	Nov. 2, 1956	3.49	July 2, 1957	5.27
31	5.60	June 28	5.51	30	4.44	Aug. 7	5.72
Mar. 5	4.99	Aug. 3	5.63	Jan. 2, 1957	4.14	26	5.71
Apr. 2	4.36	Sept. 5	5.44	Mar. 1	3.76	Sept. 27	5.68
30	4.68	28	5.68	May 7	4.65	Dec. 2	5.42

Id 21-2. Formerly Id 4. State Highway Dept. Near Cheswold. Lat  $39^{\circ}13'$ , long  $75^{\circ}34'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 14 ft, well point 11-14. Lsd, about 40 ft above msl. MP, top of casing, 1.00 ft above lsd. Highest water level 2.48 below lsd, May 1, 1952; lowest 9.52 below lsd, Nov. 3, 1954. Records available: 1950-57.

Jan. 3, 1956	7.75	May 31, 1956	5.89	Nov. 2, 1956	4.29	July 2, 1957	7.02
31	7.72	June 28	6.92	30	4.33	Aug. 7	8.27
Mar. 5	5.55	Aug. 3	7.36	Jan. 2, 1957	3.91	26	8.66
Apr. 2	4.08	Sept. 5	6.52	Mar. 1	2.66	Sept. 27	9.01
30	4.61	28	7.38	May 7	5.19	Dec. 2	8.39

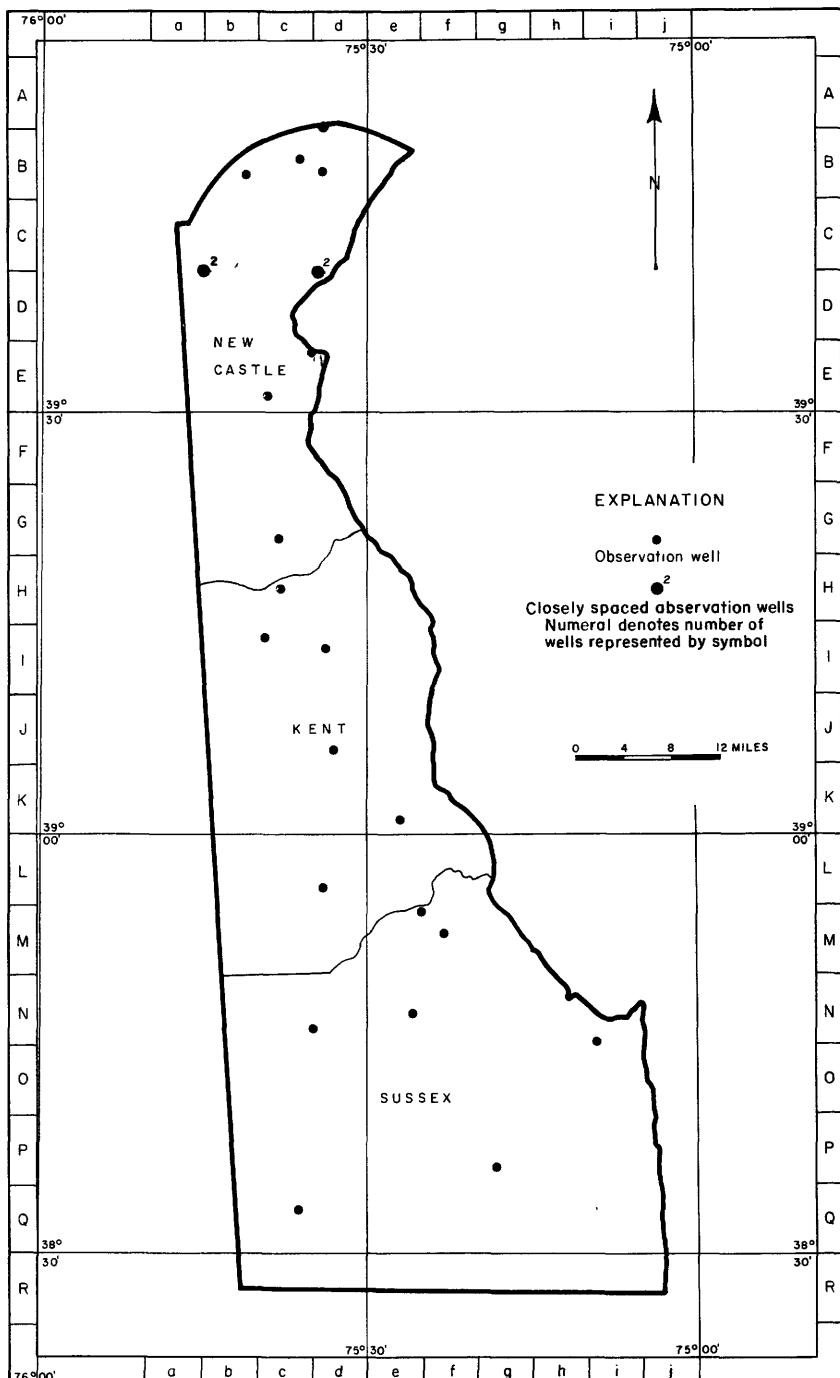


Figure 3. -- Location of observation wells in Delaware, 1956-57.

## DELAWARE, NEW CASTLE COUNTY

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Jd 42-3. Formerly Jd 11. State Highway Dept. Near Camden. Lat  $39^{\circ}06'$ , long  $75^{\circ}33'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 15 ft, well point 12-15. Lsd, about 44 ft above msl (previously reported as lsd, about 50 ft above msl). MP, top of casing, 1.00 ft above lsd. Highest water level 3.08 below lsd, June 2, 1952; lowest 9.16 below lsd, Oct. 30, 1951. Records available: 1950-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	8.32	May 31, 1956	7.30	Dec. 1, 1956	6.78	July 2, 1957	6.80
31	8.61	June 28	7.55	Jan. 2, 1957	6.41	Aug. 7	7.29
Mar. 5	8.11	Aug. 3	8.11	Mar. 1	5.97	Sept. 27	7.88
31	7.27	Sept. 28	8.67	May 7	5.85	Dec. 2	8.02
Apr. 30	7.04	Nov. 2	8.48				

Ke 43-1. Formerly Ke 4. State Highway Dept. Near Frederica. Lat  $39^{\circ}01'$ , long  $75^{\circ}27'$ . Driven observation water-table well in sand of Pleistocene age, diam  $1\frac{1}{4}$  in (previously reported as 1 in), depth 17 ft, well point 14-17. Lsd, about 22 ft above msl. MP, top of casing (since May 9, 1957), at lsd. Highest water level 4.13 below lsd, June 2, 1952; lowest 12.89 below lsd, Dec. 1, 1950. Records available: 1950-57. 1-in casing replaced by  $1\frac{1}{4}$ -in casing.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4, 1956	12.20	Apr. 30, 1956	9.94	Aug. 3, 1956	10.72	Aug. 26, 1957	11.42
30	12.51	June 2	10.51	July 3, 1957	10.21	Sept. 26	12.00
Mar. 5	11.43	28	10.96	Aug. 7	11.07	Dec. 2	12.80
31	9.90						

Ld 42-1. Formerly Ld 8. State Highway Dept. Near Harrington. Lat  $38^{\circ}56'$ , long  $75^{\circ}34'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 13 ft, well point 10-13. Lsd, about 43 ft above msl (previously reported lsd, about 52 ft above msl). MP, top of casing, 1.00 ft above lsd. Highest water level 1.28 below lsd, June 2, 1952; lowest 7.48 below lsd, Sept. 27, 1957. Records available: 1950-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	6.59	May 31, 1956	5.06	Nov. 1, 1956	2.73	July 2, 1957	6.14
30	5.89	June 28	5.22	Jan. 2, 1957	3.84	Aug. 7	7.13
Mar. 5	4.61	Aug. 3	4.57	Mar. 1	3.39	Sept. 27	7.48
31	3.50	Sept. 5	5.64	May 7	4.80	Dec. 2	5.79
Apr. 30	4.27	28	6.23				

New Castle County

Ad 52-1. Woodlawn Trustees, Inc. In Beaver Valley near Granogue. Lat  $39^{\circ}50'$ , long  $75^{\circ}34'$ . Dug unused water-table well in weathered zone of Wissahickon formation, diam 36 in, depth 23 ft. Lsd, about 260 ft above msl. MP, top of cover, 1.75 ft above lsd. Highest water level 16.70 below lsd, Mar. 31, 1956; lowest 19.49 below lsd, Sept. 30, 1957. Records available: 1955-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31, 1955	18.35	Oct. 3, 1955	17.80	June 1, 1956	17.61	Jan. 2, 1957	17.29
Mar. 1	17.49	27	18.04	July 2	17.96	Feb. 28	17.47
30	17.16	Dec. 2	18.32	Aug. 1	17.55	May 2	17.15
May 2	17.99	Jan. 3, 1956	18.57	Sept. 4	18.20	July 1	18.07
June 1	18.18	Feb. 1	18.79	Oct. 1	18.63	Aug. 30	19.07
July 1	18.44	Mar. 5	17.60	30	19.03	Sept. 30	19.49
28	18.55	31	16.70	Nov. 29	17.64	Dec. 3	18.40
Aug. 30	16.85	Apr. 30	17.10				

Bb 44-11. R. B. Walker, Sr. Hockessin. Lat  $39^{\circ}47'$ , long  $75^{\circ}41'$ . Dug unused water-table well in weathered zone of Wissahickon formation, diam 4 ft, depth 24 ft. Lsd, about 340 ft above msl. MP, top of concrete cover, 1,00 ft above lsd. Highest water level 11.85 below lsd, Apr. 30, 1956; lowest 19.40 below lsd, Jan. 4, 1955. Records available: 1955-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4, 1955	19.40	Aug. 30, 1955	12.31	Apr. 30, 1956	11.85	Jan. 2, 1957	14.70
Feb. 3	19.20	Oct. 3,	13.12	June 1	12.50	28	13.68
Mar. 1	18.91	27	13.57	July 2	13.67	May 2	11.96
30	17.55	Dec. 2	14.25	Aug. 1	14.41	July 1	14.12
May 2	16.25	Jan. 3, 1956	14.90	Sept. 4	15.32	Aug. 30	16.87
June 1	16.30	Feb. 1	15.63	Oct. 1	16.09	Sept. 30	17.24
July 1	16.60	Mar. 5	14.41	30	16.75	Dec. 3	18.02
28	17.08	31	12.50	Nov. 29	15.34		

Bc 24-2. Henry F. duPont. Winterthur. Lat  $39^{\circ}48'$ , long  $75^{\circ}36'$ . Drilled unused artesian well in Wissahickon formation, diam 8 in, depth 159 ft. Lsd, about 270 ft above msl. MP, top of iron cover, at lsd. Highest water level 5.04 below lsd, Mar. 31, 1956; lowest 11.82 below lsd, Aug. 30, 1957. Records available: 1955-57. Affected by pumping.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Bc 24-2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25, 1955	7.81	Oct. 27, 1955	5.23	June 1, 1956	7.79	Jan. 2, 1957	5.21
Mar. 29	5.36	Dec. 2	5.20	July 2	7.63	Feb. 28	5.99
May 2	7.22	Jan. 3, 1956	5.17	Aug. 1	6.58	May 2	6.40
June 1	7.94	Feb. 1	6.06	Sept. 4	8.18	July 1	8.08
July 1	6.46	Mar. 5	5.18	Oct. 1	6.27	Aug. 30	11.82
28	11.35	31	5.04	30	5.31	Sept. 30	9.64
Aug. 30	5.17	Apr. 30	5.16	Nov. 29	5.14	Dec. 3	7.44
Oct. 3	5.45						

Bd 31-1. Formerly Bd 10. F. B. Crowninshield. Near Montchanin Station. Lat  $39^{\circ}47'$ , long  $75^{\circ}34'$ . Dug unused water-table well in weathered gabbro, diam 42 in, depth 23 ft, curbed with stone. Lsd, about 250 ft above msl. MP, top of stone curbing, at lsd. Highest water level 10.30 below lsd, May 2, 1952; lowest 16.58 below lsd, Nov. 2, 1954. Records available: 1950-57.

Jan. 3, 1956	15.41	June 1, 1956	13.73	Oct. 30, 1956	14.61	July 1, 1957	14.55
Feb. 1	15.19	July 2	14.34	Nov. 29	13.62	Aug. 30	15.78
Mar. 5	14.25	Aug. 1	13.92	Jan. 2, 1957	13.42	Sept. 30	15.86
31	13.20	Sept. 4	14.78	Feb. 28	13.28	Dec. 3	15.58
Apr. 30	13.32	Oct. 1	15.01	May 2	13.18		

Ca 55-2. Formerly Ca 3. City of Newark. Academy St. and Waterworks Lane. Lat  $39^{\circ}40'$ , long  $75^{\circ}45'$ . Drilled unused artesian well in Patuxent formation, diam 8 in, depth 70 ft (previously reported as 67 ft). Lsd, 107 ft above msl (previously reported lsd, about 100 ft above msl). MP, top of casing, 0.65 ft above lsd. Highest water level 19.83 below lsd, Apr. 29, 1952; lowest 37.53 below lsd, July 24, 1955. Records available: 1950-57. Recording gage discontinued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	36.02	36.03	....	34.93	34.40	33.72	33.92	33.52	....	....	....	....
10	36.39	e36.15	35.95	34.72	34.22	33.98	33.70	....	....	....	....	....
15	36.39	36.28	35.80	34.58	34.38	34.50	33.80	33.07	....	....	....	....
20	36.45	36.23	35.56	34.62	34.22	35.31	33.95	33.02	....	....	....	....
25	36.29	36.13	35.49	34.53	34.16	34.32	33.87	32.98	....	....	....	....
Eom	35.90	36.04	34.97	34.42	33.81	34.30	36.50	....	....	....	....	....

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23, 1957	32.53	Apr. 16, 1957	33.00	Aug. 5, 1957	34.97	Oct. 2, 1957	35.26
Feb. 6	28.61	May 2	31.60	14	34.91	7	35.28
21	33.24	16	33.47	20	34.86	18	35.52
28	32.73	28	33.12	30	34.59	28	35.63
Mar. 7	32.68	June 10	32.59	Sept. 13	34.20	Nov. 7	35.76
12	35.31	20	33.65	16	34.79	15	35.83
Apr. 9	32.08	July 1	33.69	26	35.13	Dec. 3	35.80

e Estimated.

Cb 51-16. Formerly Cb 123. University of Delaware. Agricultural Experiment Station. Lat  $39^{\circ}40'$ , long  $75^{\circ}44'$ . Driven observation water-table well in sand of Patuxent formation, diam  $1\frac{1}{4}$  in, depth 26 ft. Lsd, 92.6 ft above msl. MP, top of casing, at lsd. Highest water level 6.50 below lsd, May 1, 1952; lowest 13.40 below lsd, July 28, 1955. Records available: 1951-57.

Jan. 3, 1956	13.22	June 1, 1956	11.29	Oct. 30, 1956	11.89	July 1, 1957	10.79
Feb. 1	13.17	July 3	11.59	Nov. 29	11.05	Aug. 7	11.72
Mar. 5	12.28	Aug. 1	11.10	Jan. 2, 1957	10.50	30	12.11
31	11.02	Sept. 4	11.35	Feb. 28	9.88	Sept. 27	12.18
May 1	10.99	28	12.00	May 2	9.52	Dec. 3	12.51

Cd 52-2. Formerly Cd 2. City of New Castle. Lat  $39^{\circ}40'$ , long  $75^{\circ}34'$ . Dug unused water-table well in sand of Pleistocene age, 12 by 13 ft, depth 23 ft. Lsd, 9.21 ft above msl. MP, hole in southwest corner of concrete manhole cover, 1.40 ft above lsd. Highest water level 3.46 above msl, Apr. 20, 1953 (previously reported as 3.37 above msl, Apr. 19, 1953); lowest 13.09 below msl, Aug. 1, 1950. Records available: 1950-57. Affected by pumping.

Lowest water level above and below msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	6.07	7.77	8.09	7.71	9.45	9.39	10.61	8.86	2.16	+0.54	+1.57	+1.93
10	e6.44	8.16	8.51	7.59	10.34	10.15	10.69	9.94	+.01	1.69	+1.66	+1.88
15	6.99	8.31	8.34	8.01	10.41	10.69	11.37	4.16	+.09	+.66	+1.70	+2.06
20	7.36	8.24	....	8.86	9.63	10.30	11.59	1.66	1.59	+.65	+1.86	+2.29
25	7.44	8.23	8.00	9.20	10.59	e10.49	10.49	1.07	2.39	+.75	+2.04	+2.44
Eom	7.77	8.33	7.94	8.42	e10.15	11.04	9.47	2.64	+.23	+1.04	+1.94	+2.51

e Estimated.

## DELAWARE, NEW CASTLE COUNTY

13

Cd 52-2--Continued.

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+2.73	....	1.54	1.94	+1.74	2.59	1.40	5.22	8.23	4.17	5.81	....
10	3.23	+1.61	+2.02	1.12	2.84	1.87	4.76	3.39	7.69	6.61	2.94	5.69
15	....	1.79	2.12	.97	2.74	+0.08	5.69	7.22	5.79	5.91	6.39	....
20	....	2.11	1.59	+1.81	2.47	3.58	3.99	....	8.20	3.54	6.25	e5.94
25	....	1.84	1.69	....	+ .41	2.64	7.29	....	6.69	6.35	4.95	....
Eom	....	1.69	+1.72	2.26	2.93	+ .44	5.94	6.09	5.29	6.49	2.89	6.94

e Estimated.

Cd 52-14. Formerly Cd 46. City of New Castle. Lat  $39^{\circ}40'$ , long  $75^{\circ}34'$ . Jetted unused artesian well in sand of Cretaceous age, diam 6 in, depth 121 ft. Lsd, 11.01 ft above msl. MP, top of casing, 1.20 ft above lsd. Highest water level 7.40 (previously reported as 7.09) above msl, June 1, 1953; lowest 1.81 above msl, July 15, 1957. Records available: 1952-57.

Affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4, 1956	+3.57	Oct. 22, 1956	c22.29	Jan. 21, 1957	c4.47	Apr. 9, 1957	c13.77
9	+3.73	29	c21.19	28	c6.18	19	c16.29
13	+4.21	Nov. 5	c23.59	Feb. 4	c8.81	26	c17.09
17	+4.18	12	d14.24	13	c10.27	May 3	c12.94
27	+4.12	19	c32.04	19	c12.75	17	c12.19
Feb. 12	+4.13	26	c23.67	23	c13.86	29	c18.79
Mar. 7	+4.12	Dec. 3	d11.39	Mar. 2	c12.79	June 6	d16.09
15	+4.24	11	d11.09	8	c13.29	13	d14.89
Apr. 8	+4.53	26	d13.29	15	d13.32	25	d10.19
Aug. 8	+4.29	Jan. 2, 1957	c15.24	21	d13.11	July 6	c19.74
Oct. 2	c17.72	9	d1.84	Apr. 3	c11.56	15	+1.81
16	c25.24	15	c2.82				

c Nearby well being pumped.

d Nearby well pumped recently.

Ec 15-5. Formerly Ec 11. Governor Bacon Health Center. Lat  $39^{\circ}34'$ , long  $75^{\circ}35'$ . Drilled unused artesian well in sand of Magothy formation, diam 6 in, depth 157 ft, cased to 157. Lsd, about 15 ft above msl. MP, top of casing, 1.40 ft above lsd. Highest water level 23.2 below lsd, Oct. 10, 1955; lowest 68.0 below lsd, Oct. 10, 1957. Records available: 1952-57. Affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	56.5	54.6	43.2	45.4	43.2	54.9	55.9	....	e51.5	45.2	45.4	e49.4
10	56.5	55.6	....	....	48.7	40.6	53.9	e49.1	e52.7	e47.3	36.8	43.0
15	48.2	34.8	34.0	47.9	49.9	46.5	47.6	e47.6	42.8	29.6	....	e50.6
20	49.0	43.7	38.3	37.5	46.0	....	54.2	....	e50.2	45.8	35.0	42.5
25	52.1	....	48.4	46.3	45.6	50.6	48.0	e53.5	e48.3	....	33.9	43.6
Eom	50.1	56.5	45.8	53.4	47.2	57.2	....	43.1	e50.5	26.7	e46.9	e47.7

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	30.4	51.5	49.3	53.4	52.3	53.4	44.5	40.4	63.9	36.1	50.2	47.3
10	33.8	53.7	50.0	50.4	54.0	51.9	41.3	37.4	57.7	68.0	56.0	54.8
15	44.5	33.3	54.2	49.0	61.6	39.7	55.3	58.8	52.5	58.9	57.4	50.0
20	44.3	52.8	....	....	55.0	55.4	47.3	39.5	49.5	57.9	54.3	40.1
25	....	47.8	53.3	36.8	54.0	57.0	48.0	50.6	52.9	58.6	....	....
Eom	51.0	52.3	41.6	50.0	51.8	40.0	60.5	56.5	55.6	55.7	54.0	....

e Estimated.

Ec 42-1. Formerly Ec 7. State Highway Dept. Near St. Georges. Lat  $39^{\circ}31'$ , long  $75^{\circ}39'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 11 ft, well point 9.5-11. Lsd, 31 ft above msl (previously reported about 35 ft). MP, top of casing, at lsd. Highest water level 0.60 below lsd, May 1, 1952; lowest 4.59 below lsd, Jan. 3, 1956. Records available: 1950-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	4.59	July 2, 1956	4.07	Nov. 29, 1956	3.77	Aug. 7, 1957	3.95
Feb. 1	4.36	Aug. 3	3.93	Jan. 2, 1957	3.24	26	3.98
Mar. 5	4.04	Sept. 4	4.26	Mar. 1	2.72	Sept. 27	3.92
Apr. 30	3.47	Oct. 2	4.50	May 2	2.86	Dec. 2	4.08
May 31	3.71	Nov. 1	4.39	July 2	3.55		

Gc 52-1. Formerly Gc 5. State Highway Dept. Near Blackbird. Lat  $39^{\circ}21'$ , long  $75^{\circ}38'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 10 ft, well point 8.5-10. Lsd, about 40 ft above msl. MP, top of casing, 1.00 ft above lsd. Highest water level 0.42 above lsd, Nov. 2, 1956; lowest 3.91 below lsd, July 29, 1954. Records available: 1950-57.

## Gc 52-1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	2.85	June 28, 1956	2.93	Jan. 2, 1957	1.15	July 31, 1957	3.67
31	2.13	Aug. 3	2.82	Mar. 1	.07	Aug. 17	3.74
Mar. 5	1.64	Sept. 5	2.87	May 7	2.26	26	3.14
Apr. 2	1.22	28	2.97	July 2	3.02	Sept. 27	2.70
30	1.93	Nov. 2	+ .42	24	3.59	Dec. 2	1.80
May 31	2.51	30	1.28				

## Sussex County

Me 57. J. H. Prettyman. Milford. Lat  $38^{\circ}55'$ , long  $79^{\circ}55'$ . Jetted unused artesian well in Frederica aquifer, diam 6 in, depth 206 ft. Lsd, about 20 ft above msl. MP, top of casing, at lsd. Highest water level 16.37 below lsd, Mar. 31, 1956; lowest 20.89 below lsd, Oct. 28, 1955. Records available: 1952-57. Affected by pumping.

Sept. 3, 1952	d22.92	Feb. 25, 1954	18.80	May 2, 1955	17.69	June 1, 1956	d18.37
Feb. 2, 1953	18.34	Mar. 31	18.65	31	d22.39	28	d21.97
27	18.08	Apr. 30	18.70	July 1	d21.04	Aug. 3	d20.16
Apr. 1	17.62	June 1	d20.63	29	d22.32	Sept. 5	d25.16
May 1	17.65	July 2	d20.72	Aug. 31	d22.65	28	d23.80
29	d21.00	29	d21.97	Sept. 30	d24.50	Nov. 1	18.96
June 30	d20.76	Aug. 30	d24.12	Oct. 28	20.89	30	17.43
July 30	d21.36	Sept. 29	d25.23	Dec. 2	18.04	Jan. 4, 1957	17.27
Aug. 28	d23.75	Oct. 29	18.10	Jan. 4, 1956	17.32	Mar. 1	16.83
Sept. 29	d24.11	Nov. 30	19.73	30	17.43	May 6	16.92
Oct. 30	20.64	Jan. 3, 1955	18.98	Mar. 5	16.83	July 3	d21.12
Nov. 30	19.43	31	18.72	31	16.37	Sept. 26	d23.62
Dec. 30	18.87	Feb. 28	18.30	Apr. 30	16.68	Dec. 2	19.73
Feb. 1, 1954	18.72	Apr. 1	18.47				

d Nearby well pumped recently.

Mf 3. State Highway Dept. Near Milford. Lat  $38^{\circ}53'$ , long  $75^{\circ}23'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 26 ft (previously reported as 27 ft), well point 23-26. Lsd, about 40 ft above msl. MP, top of casing, 0.70 ft above lsd. Highest water level 13.45 below lsd, June 2, 1952; lowest 22.62 below lsd, Aug. 3, 1956. Records available: 1950-57.

Jan. 4, 1956	19.47	June 1, 1956	18.78	Nov. 30, 1956	19.02	July 24, 1957	18.28
30	19.89	Aug. 3	22.62	Jan. 4, 1957	18.81	31	18.46
Mar. 5	19.08	Sept. 5	19.97	Mar. 1	17.95	Aug. 7	18.65
31	18.62	28	19.38	May 6	17.22	26	19.18
May 2	18.19	Nov. 2	19.99	July 3	17.88	Sept. 26	19.64

Nc 6. P. H. Cannon. Near Greenwood. Lat  $38^{\circ}46'$ , long  $75^{\circ}35'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 15 ft. Lsd, about 43 ft above msl. MP, top of casing, 1.00 ft above lsd. Highest water level 6.67 below lsd, Jan. 30, 1952; lowest 9.98 below lsd, Aug. 7, 1957. Records available: 1950-57.

Jan. 3, 1956	9.25	May 31, 1956	9.24	Nov. 2, 1956	7.98	July 2, 1957	9.08
30	8.84	June 28	9.33	Dec. 1	8.28	Aug. 7	9.98
Mar. 5	8.45	Aug. 6	9.12	Jan. 2, 1957	7.97	Sept. 27	9.82
31	8.10	Sept. 5	9.65	Mar. 2	7.49	Dec. 2	9.17
Apr. 30	8.74	28	9.68	May 7	8.87		

Ne 1. State Highway Dept. Ellendale Swamp. Lat  $38^{\circ}47'$ , long  $75^{\circ}26'$ . Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 14 ft. Lsd, about 50 ft above msl. MP, top of casing, 1.00 ft above lsd. Highest water level 1.01 below lsd, Nov. 2, 1956; lowest 6.23 below lsd, Oct. 31, 1950. Records available: 1950-57.

Jan. 4, 1956	2.81	June 1, 1956	2.86	Nov. 2, 1956	1.01	July 3, 1957	4.50
30	1.94	28	3.44	30	1.82	Aug. 7	6.19
Mar. 5	1.85	Aug. 3	2.96	Jan. 4, 1957	1.84	Sept. 27	5.35
31	1.79	Sept. 5	4.39	Mar. 1	1.31	Dec. 2	2.45
Apr. 30	2.17	28	4.80	May 6	2.93		

Ni 3. City of Lewes. Lat  $38^{\circ}45'$ , long  $75^{\circ}09'$ . Drilled observation artesian well in sand of Pleistocene age, diam 6 in, depth 84 ft. Lsd, about 20 ft above msl. MP, hole in recorder platform, 2.34 ft above lsd. Highest water level 13.94 below lsd, May 1, 1953; lowest 21.74 below lsd, Sept. 25, 1947. Records available: 1947-48, 1950-57. Affected by pumping.

## Ni 3--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1, 1956	18.02	Feb. 19, 1956	18.06	July 30, 1956	16.22	Sept. 6, 1956	17.39
5	18.35	Mar. 2	17.35	Aug. 4	16.46	May 7, 1957	14.35
10	18.22	Apr. 5	17.81	17	17.22	July 3	16.72
31	18.25	9	17.25	22	18.15	Aug. 1	17.94
Feb. 4	18.12	12	17.73	27	17.58	6	18.41
9	18.28	17	17.20	Sept. 1	17.83	Dec. 2	16.74
14	17.72	22	16.90				

Pg 4. State Highway Dept. Near Millsboro. Lat 38°36', long 75°19'. Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 22 ft, well point 20.8-22. Lsd, about 30 ft above msl. MP, top of casing, at lsd (since Aug. 14, 1957). Highest water level 12.54 below lsd, Nov. 2, 1956; lowest 17.85 below lsd, Aug. 14, 1957. Records available: 1950-57.

Jan. 4, 1956	13.91	May 4, 1956	13.87	Jan. 4, 1957	13.52	Aug. 14, 1957	17.85
30	13.92	June 1	13.82	Mar. 1	13.81	Sept. 27	16.35
Mar. 2	13.87	Nov. 2	12.54	May 6	14.26	Dec. 2	16.14
31	13.85	30	13.02	July 3	14.70		

Qc 4. State Highway Dept. Near Laurel. Lat 38°33', long 75°36'. Driven observation water-table well in sand of Pleistocene age, diam 1 in, depth 8 ft, well point 7-8. Lsd, about 15 ft above msl. MP, top of casing, 1.00 ft above lsd. Highest water level 0.19 below lsd, Apr. 1, 1952; lowest 3.04 below lsd, Oct. 2, 1951. Records available: 1950-57.

Jan. 3, 1956	2.10	May 31, 1956	1.82	Nov. 2, 1956	2.59	July 2, 1957	1.54
30	2.09	June 28	1.98	Dec. 1	2.37	Aug. 7	2.22
Mar. 2	1.45	Aug. 6	2.32	Jan. 2, 1957	2.11	Sept. 27	1.72
31	1.18	Sept. 5	2.74	Mar. 1	1.19	Dec. 2	2.82
May 2	1.43	28	2.78	May 7	1.38		

## References

- Groot, J. J., and Rasmussen, W. C., 1954, Geology and ground-water resources of the Newark area, Delaware: Delaware Geol. Survey Bull. 2.
- Marine, I. W., and Rasmussen, W. C., 1955, Preliminary report on the geology and ground-water resources of Delaware: Delaware Geol. Survey Bull. 4.
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## INDIANA

By Frank A. Watkins, Jr., and Donald G. Jordan

The observation-well program was continued during 1956 and 1957 in cooperation with the Indiana Department of Conservation, Division of Water Resources. Figure 4 shows the location of observation wells whose measurements are included in this report.

### Well-Numbering System

Wells are designated by abbreviations derived from county names and by serial numbers. For example, Ma 10 is observation well 10 in Marion County.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum unless otherwise indicated.

#### Allen County

Al 3. City of Fort Wayne. Lawton Park, Clinton and East 4th Sts. SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 35, T. 31 N., R. 12 E. (previously reported as SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 36, T. 13 N.). Drilled unused artesian well in limestone, diam 8 in, reported depth 400 ft. MP, edge of flange on casing, 1.20 ft above lsd. Highest water level 4.57 below lsd, Apr. 7, 1950; lowest 12.72 below lsd, Sept. 6, 1946. Records available: 1944-57.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	10.51	10.81	9.44	9.33	8.53	8.58	9.75	10.51	10.92	11.36	11.44	11.34
10	10.59	10.78	9.10	9.38	8.50	8.80	9.94	10.63	11.30	11.42	11.43	11.30
15	10.67	10.51	9.08	9.41	8.25	9.06	10.13	10.68	11.10	11.45	11.38	11.31
20	10.74	10.27	(k)	9.65	8.39	9.28	10.25	10.72	11.20	11.48	11.38	11.33
25	10.81	10.14	9.38	9.80	8.64	9.43	10.34	10.78	11.27	11.49	11.24	11.31
Eom	10.79	(k)	9.26	9.31	8.35	9.59	10.35	10.81	11.30	11.43	11.29	11.26

1957

5	e11.34	11.11	10.70	9.76	7.59	9.05	8.95	9.86	10.65	10.95	10.43	10.39
10	11.34	10.98	10.70	5.19	(k)	9.16	8.97	10.00	10.74	10.97	10.49	9.95
15	11.41	10.94	10.74	5.75	8.29	9.22	9.13	10.08	10.82	10.98	10.36	9.92
20	11.45	10.94	10.72	6.37	8.41	9.30	9.36	10.24	10.95	10.92	10.27	9.49
25	11.12	10.93	10.71	6.80	8.66	9.44	9.54	10.34	10.86	10.54	10.26	8.79
Eom	11.05	10.85	10.68	7.17	8.88	9.13	9.69	10.54	10.87	10.38	10.28	8.50

e Estimated.

k Other measurements available near this date.

#### Blackford County

Bf 1. Robert Wearly. Formerly John L. and Katherine Wise. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 2, T. 23 N. (previously reported as T. 24 N.), R. 10 E. Originally dug unused water-table well in glacial drift, diam 4 ft, depth 18 ft, cribbed with brick. On May 5, 1955, a 4-in steel casing was set to a depth of 18 ft and well backfilled with 2-in gravel. Lsd, 921 ft above msl. MP, top of 4-in cap at  $\frac{3}{4}$ -in hole, 0.62 ft below lsd. Highest water level 0.69 below lsd, Feb. 9, 1952; lowest 9.37 below lsd, Jan. 16, 1954. Records available: 1945-57.

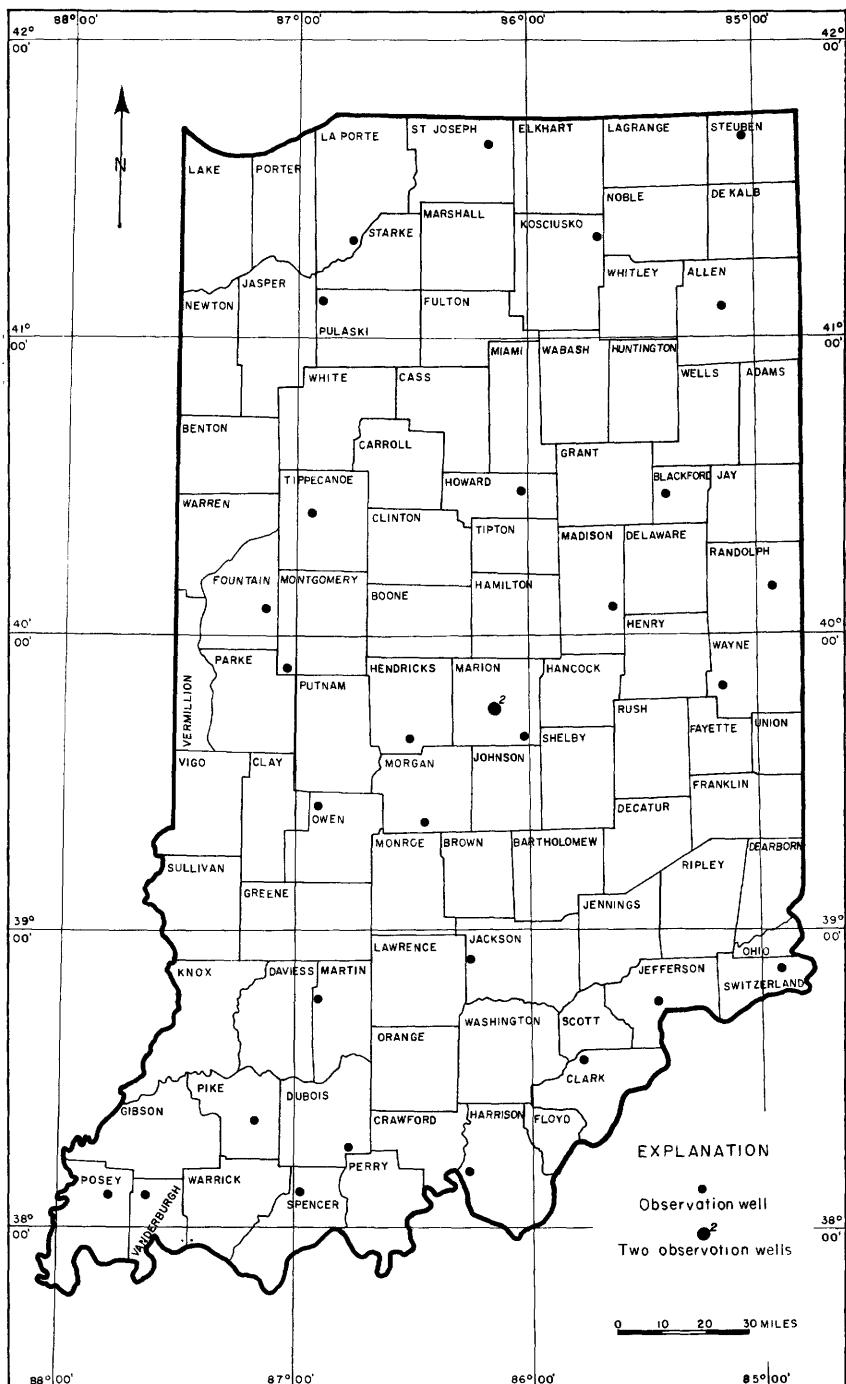


Figure 4.--Location of observation wells in Indiana, 1956-57.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Bf 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7, 1956	5.64	Sept. 20, 1956	5.62	Feb. 28, 1957	2.00	Aug. 1, 1957	3.55
14	5.86	27	5.88	Mar. 7	3.11	8	5.01
21	5.95	Oct. 4	6.10	14	2.84	15	5.23
Mar. 27	3.04	11	6.36	19	2.80	22	5.63
Apr. 25	4.25	18	6.28	28	3.02	29	5.54
May 24	4.04	25	5.97	Apr. 4	3.00	Sept. 5	5.42
28	4.29	Nov. 1	6.06	11	1.60	12	5.66
31	4.22	8	6.34	18	1.02	19	4.30
June 7	3.61	15	6.24	25	1.84	26	4.03
14	4.07	23	5.57	May 2	2.53	Oct. 3	5.03
21	3.69	30	5.53	9	2.84	10	5.06
28	4.29	Dec. 6	5.76	16	2.54	17	1.50
July 5	4.56	13	2.21	23	1.58	24	1.60
11	4.85	20	3.59	31	3.21	Nov. 1	2.24
19	4.89	27	2.52	June 6	3.46	8	1.60
26	4.98	Jan. 3, 1957	3.52	13	2.03	15	1.73
Aug. 2	5.07	10	3.47	20	3.07	21	3.03
9	5.21	17	3.37	24	2.52	29	2.74
15	5.01	24	1.84	July 3	3.52	Dec. 5	4.00
23	5.27	31	2.63	12	3.22	13	3.04
30	5.37	Feb. 7	2.57	18	2.90	19	1.49
Sept. 6	5.56	14	3.56	25	3.51	26	1.48
13	5.52	21	3.52				

Clark County

C1 1. State of Indiana. Clark County State Forest. SE<sub>1</sub>NE<sub>4</sub> sec. 36, T. 2 N., R. 6 E. Dug unused water-table well in shale, diam 4 ft, depth 35 ft, cribbed with stone. On Oct. 7, 1955, an 8-in steel casing was set to a depth of 35 ft and well backfilled with 2-in crushed rock. MP, top of recorder base at 1-in hole, 2.65 ft above lsd. Highest water level 0.40 below lsd, Feb. 2, 1956; lowest 30.00 below lsd, Dec. 26-27, 1954. Records available: 1936-57. Measurements by Glen Taylor and Ray Collings.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	28.70	6.15	9.69	12.45	13.50	23.10	22.50	27.60	28.50	29.00	29.55	29.85
10	29.00	9.30	6.09	13.00	13.75	24.20	24.05	27.80	28.70	29.15	29.60	29.20
15	29.30	1.85	5.65	13.05	14.90	25.15	25.30	28.00	28.70	29.25	29.60	29.00
20	29.40	5.15	5.80	11.10	16.75	25.75	26.10	(k)	28.75	29.30	29.70	29.40
25	29.55	2.85	9.35	e13.40	18.90	25.75	26.70	28.25	28.85	29.35	29.75	.....
Eom	18.50	5.45	12.00	14.15	21.55	20.55	27.25	28.35	28.95	29.50	29.80	28.55
1957												
5	28.95	15.90	11.60	(k)	10.95	e8.45	13.90	(k)	27.60	28.30	28.85	16.40
10	27.05	8.05	e11.05	(k)	14.00	13.75	16.05	(k)	27.75	28.40	28.90	e10.90
15	23.75	(k)	(k)	9.95	15.80	12.45	18.75	26.60	27.85	28.55	16.65	14.50
20	25.45	(k)	(k)	11.75	16.95	11.20	21.45	26.95	28.00	28.60	(k)	(k)
25	14.55	17.00	e15.65	5.60	6.45	7.70	23.30	27.15	28.10	28.70	16.25	9.45
Eom	15.15	.....	16.80	6.85	10.05	10.25	24.85	27.30	28.30	28.85	15.85	.....

e Estimated.

k Other measurements available near this date.

Dubois County

Du 2. State of Indiana. Ferdinand State Forest. SW<sub>1</sub>NW<sub>4</sub> sec. 18, T. 3 S., R. 3 W. Drilled unused well in limestone, diam 6 in, depth 33 ft. MP, top of concrete pump base at opening, 0.30 ft above lsd. Highest water level 4.51 below lsd, Feb. 22, 1950; lowest 18.45 below lsd, Nov. 13, 1944. Records available: 1936-37, 1942-57. Measurements by Henry Huff.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2, 1956	16.00	Mar. 5, 1956	14.70	May 7, 1956	9.40	July 23, 1956	15.30
10	15.95	13	11.80	14	12.30	Aug. 6	15.10
16	16.10	19	12.70	21	12.10	20	15.30
23	16.10	26	13.90	June 4	14.80	Sept. 4	15.90
30	12.30	Apr. 3	14.50	11	15.10	10	16.10
Feb. 6	14.60	9	13.90	18	15.30	17	16.00
12	15.10	16	12.30	25	15.25	24	16.05
20	14.20	23	13.60	July 2	15.40	Oct. 1	16.20
27	13.70	30	13.85	16	15.20	8	16.25

## Du 2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 22, 1956	16.40	Feb. 18, 1957	15.60	June 3, 1957	12.30	Sept. 16, 1957	15.70
29	16.40	25	15.70	10	12.50	23	15.70
Nov. 5	16.50	Mar. 4	15.75	17	12.25	30	15.80
12	16.45	11	15.70	24	12.00	Oct. 7	15.90
19	16.70	18	15.70	July 2	13.80	14	16.45
26	16.70	25	15.20	8	14.25	22	16.10
Dec. 3	16.70	Apr. 1	15.45	15	14.50	29	16.20
10	16.70	8	8.30	22	14.30	Nov. 4	16.20
17	16.60	15	14.85	Aug. 5	14.00	12	16.10
Jan. 7, 1957	16.50	29	15.10	12	14.25	19	14.50
14	16.60	May 6	15.25	19	14.50	Dec. 2	15.20
22	15.20	13	15.25	26	15.20	10	15.20
Feb. 4	16.10	20	13.70	Sept. 3	15.35	23	14.10
11	15.64	27	11.95	9	15.70	30	14.50

Fountain County

Fo 1. Merchants & Farmers Telephone Co. Hillsboro. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 12, T. 19 N., R. 7 W. Drilled unused water-table well in sandstone, diam 4 in, depth 59 ft. Lsd, 708 ft above msl. MP, top of concrete floor, 0.30 ft above lsd. Highest water level 33.28 below lsd, Mar. 7, 1950; lowest 44.50 below lsd, Dec. 17, 1954. Records available: 1944-57.

Jan. 6, 1956	41.9	July 27, 1956	41.0	Jan. 18, 1957	41.7	June 28, 1957	38.9
13	42.0	Aug. 3	41.2	25	41.7	July 5	37.7
20	42.4	10	41.1	Feb. 1	41.6	19	37.7
27	42.1	17	41.1	8	41.7	26	37.7
Feb. 2	42.1	24	41.1	15	41.8	Aug. 2	38.5
10	41.9	31	41.2	22	41.7	16	43.3
17	41.8	Sept. 7	41.2	Mar. 1	41.8	23	39.7
24	41.8	14	41.7	8	41.8	30	39.9
Mar. 2	41.8	21	41.8	13	41.7	Sept. 6	40.0
9	41.8	28	41.8	15	41.7	13	40.2
16	41.7	Oct. 5	41.9	22	41.7	20	40.2
23	41.7	12	41.9	29	41.7	27	40.1
30	41.7	19	41.9	Apr. 5	41.6	Oct. 4	40.1
Apr. 6	41.7	26	41.9	13	41.6	12	39.9
13	41.9	Nov. 2	41.8	19	41.6	18	41.0
May 4	41.8	9	41.8	26	41.2	25	39.3
11	41.8	16	41.9	May 3	41.6	Nov. 1	39.3
18	41.9	23	41.9	10	41.7	8	39.8
25	41.8	30	41.7	17	41.7	15	39.8
June 1	41.7	Dec. 7	41.7	24	41.6	22	41.3
8	41.6	14	41.7	31	41.6	29	41.3
15	41.7	21	41.8	June 7	40.8	Dec. 6	41.2
22	41.0	28	41.7	14	39.7	13	41.2
July 13	41.0	Jan. 4, 1957	41.7	21	39.1	20	41.0
20	40.9	11	41.6	24	39.08	27	41.0

Harrison County

Hr 3. State of Indiana. Harrison County State Forest. SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 2, T. 4 S., R. 2 E. Dug unused well in rock, diam 5 ft, depth 25 ft, cribbed with stone. MP, top of plank cover at painted arrow, 0.44 ft above lsd. Highest water level 2.00 below lsd, Mar. 21, 1939; lowest 8.70 below lsd, Jan. 9, 1954. Records available: 1938-57. Measurements by W. Lowe and Lee Flanagan.

Jan. 7, 1956	3.98	Apr. 15, 1956	2.58	July 21, 1956	6.49	Oct. 28, 1956	8.15
14	4.20	22	3.12	28	6.70	Nov. 3	8.21
21	4.31	28	3.05	Aug. 4	6.81	10	8.28
29	2.41	May 5	2.96	11	6.98	17	8.39
Feb. 5	2.95	12	3.10	19	7.14	24	8.30
11	2.67	19	3.21	25	7.26	Dec. 1	8.35
18	2.36	26	4.10	Sept. 1	7.43	9	8.52
25	2.41	June 2	4.11	8	7.58	15	8.58
Mar. 3	2.93	9	4.87	15	7.70	23	8.21
10	2.92	16	5.66	22	7.77	30	7.30
17	2.73	23	5.10	29	7.88	Jan. 5, 1957	8.35
24	2.94	30	5.49	Oct. 6	7.94	12	2.91
31	3.08	July 3	5.93	13	8.05	19	3.18
Apr. 7	2.88	14	6.27	20	8.08	27	2.96

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

## Hr 3--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2, 1957	2.91	Apr. 27, 1957	2.96	July 21, 1957	5.16	Oct. 20, 1957	7.76
9	2.28	May 4	3.31	28	5.36	27	7.86
17	2.96	11	3.95	Aug. 4	5.66	Nov. 3	7.91
23	3.13	18	4.58	11	5.96	10	7.86
Mar. 3	2.91	26	2.26	18	6.26	16	2.96
9	2.91	June 1	3.25	25	6.56	24	3.01
17	2.95	8	2.42	31	6.86	Dec. 1	3.06
24	2.96	16	2.91	Sept. 8	7.06	8	2.86
31	2.95	23	3.11	15	7.26	15	2.96
Apr. 6	2.65	30	2.96	22	7.36	22	2.76
14	2.95	July 7	3.96	29	7.46	29	2.96
22	2.72	14	4.66	Oct. 6	7.66		

Hendricks County

Hd 1. Brocia A. and M. Smith. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 14, T. 14 N., R. 1 W. Drilled unused artesian well in glacial drift, diam 4 in, depth 46 ft. Lsd, 842 ft above msl. MP, top east side of casing, 0.30 ft above lsd. Highest water level 0.30 above lsd, Apr. 17, 24, 1944, Apr. 10, 1957; lowest 9.86 below lsd, Dec. 27, 1954. Records available: 1944-57.

Jan. 1, 1956	3.13	July 2, 1956	2.90	Jan. 5, 1957	6.38	July 8, 1957	0.34
9	3.60	9	2.82	14	6.24	15	1.16
17	4.13	16	3.15	21	6.16	25	2.30
23	4.38	23	3.69	28	4.12	Aug. 1	2.88
Feb. 1	4.38	30	4.05	Feb. 4	4.01	7	3.48
6	3.63	Aug. 6	4.50	11	2.92	14	3.93
13	1.89	13	4.88	18	2.75	21	4.35
20	.58	20	5.16	25	2.67	29	4.58
27	.13	27	5.60	Mar. 4	2.15	Sept. 3	4.80
Mar. 5	.75	Sept. 3	5.86	11	2.48	10	5.15
13	.67	10	6.06	18	2.74	18	5.46
19	.50	18	6.27	25	2.80	24	5.65
26	.62	24	6.40	Apr. 4	.88	Oct. 1	5.74
Apr. 2	.88	Oct. 1	6.73	10	+.30	7	6.50
9	.34	8	6.87	17	.26	14	6.10
16	.70	15	7.15	24	.47	21	6.27
23	1.47	22	7.26	May 2	1.50	28	5.65
30	1.60	29	7.52	8	2.13	Nov. 4	5.91
May 7	1.52	Nov. 6	7.50	15	1.20	11	5.78
14	2.60	11	7.75	21	+.12	18	4.47
21	2.68	19	7.72	28	+.06	25	3.88
28	2.64	26	7.68	June 6	.27	Dec. 2	4.20
June 4	1.37	Dec. 3	7.79	12	1.17	12	3.26
11	2.07	10	7.15	17	1.67	18	2.86
18	2.73	17	6.90	24	1.61	26	
25	2.81	27	6.26	July 1	.18		

Howard County

Hd 4. Howard L. and Earl M. Shenk. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, T. 24 N., R. 4 E. Dug unused water-table well in till, diam 42 in, depth 19 ft. Lsd, 835 ft above msl. MP, top of plank cover at painted arrow, 0.05 ft above lsd. Highest water level 0.96 below lsd, Apr. 10, 1948; dry, Jan. 30-July 3, 17, Sept. 4, 1954-Jan. 1, 1955. Records available: 1945-57.

Jan. 7, 1956	6.05	Apr. 28, 1956	5.67	Aug. 18, 1956	8.73	Dec. 12, 1956	14.29
16	6.94	May 5	5.94	25	9.06	15	14.09
21	7.15	12	6.11	Sept. 1	9.38	22	14.30
28	7.70	19	6.23	8	9.82	29	14.55
Feb. 4	7.96	26	6.64	15	10.04	Jan. 5, 1957	14.78
11	7.97	June 2	6.33	22	10.43	12	15.01
18	6.29	9	6.31	29	10.75	19	15.25
25	4.32	16	6.52	Oct. 6	11.07	26	15.22
Mar. 3	2.98	23	6.69	13	11.48	Feb. 2	15.30
10	2.14	30	6.93	20	11.82	9	15.15
17	2.97	July 7	7.19	27	12.20	16	13.55
24	2.80	14	7.42	Nov. 3	12.48	23	12.12
31	3.11	21	7.72	10	12.78	Mar. 2	9.79
Apr. 7	3.79	28	8.03	17	13.17	9	8.04
14	4.46	Aug. 5	8.27	24	13.39	16	7.55
21	5.05	11	8.53	Dec. 1	13.60	23	7.57

## Ho 4--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 30, 1957	7.80	June 14, 1957	4.92	Aug. 23, 1957	7.33	Nov. 1, 1957	10.37
Apr. 6	5.25	21	5.12	30	7.70	8	10.53
12	2.25	25	5.31	Sept. 6	8.58	15	10.52
19	1.75	July 5	4.55	13	8.59	22	10.03
26	2.00	12	4.73	20	9.00	29	9.67
May 4	2.99	19	4.74	27	9.11	Dec. 6	9.56
10	4.07	26	5.11	Oct. 4	9.49	13	5.67
24	3.15	Aug. 2	5.67	11	9.80	20	3.25
31	3.50	9	6.25	18	10.11	27	1.98
June 7	4.28	16	6.77	25	10.20		

Jackson County

Jk 2. Ralph Fish. SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 24, T. 6 N., R. 2 E. Drilled unused artesian well in rock, diam 6 in, depth 93 ft. Lsd, 884 ft above msl. MP, edge of 1-in hole in pump base, 1.00 ft above lsd. Highest water level 10.18 below lsd, Apr. 23, 1951; lowest 22.21 below lsd, Jan. 25, 1954. Records available: 1944-57.

Jan. 2, 1956	14.66	July 9, 1956	11.83	Jan. 7, 1957	13.84	July 8, 1957	11.55
9	14.70	16	12.19	14	13.90	15	11.81
16	14.48	23	12.40	20	13.78	22	12.30
23	14.54	30	12.44	29	13.29	29	12.56
30	14.46	Aug. 6	12.74	Feb. 4	13.06	Aug. 4	12.79
Feb. 6	13.79	13	13.27	10	12.11	12	13.10
13	13.30	20	13.56	18	12.24	19	13.37
20	12.80	27	13.90	25	11.69	25	13.59
27	12.15	Sept. 3	13.67	Mar. 4	11.63	Sept. 3	13.82
Mar. 5	12.02	10	14.57	11	11.61	9	14.42
11	12.18	17	14.35	18	11.75	16	14.63
19	12.90	24	14.31	25	11.57	23	15.30
26	12.84	Oct. 1	14.68	Apr. 1	11.46	30	15.82
Apr. 2	11.64	8	14.81	8	11.09	Oct. 7	16.08
9	11.56	15	15.30	15	11.42	14	16.80
16	11.00	22	15.31	22	11.24	21	17.08
23	11.26	29	15.84	28	11.18	28	17.37
30	11.80	Nov. 5	16.20	May 6	11.51	Nov. 4	17.32
May 7	12.09	12	16.15	13	11.78	11	18.01
14	11.60	19	16.64	20	11.78	18	16.08
21	12.12	26	16.20	27	11.57	25	15.28
28	11.83	Dec. 3	16.26	June 3	11.40	Dec. 1	14.25
June 4	11.79	10	16.04	10	11.49	9	14.40
11	12.05	17	15.45	17	11.42	16	13.10
18	12.11	24	15.12	24	11.46	23	12.56
25	12.26	31	14.24	July 1	11.43	30	11.90
July 2	11.85						

Jefferson County

Jf 2. State of Indiana. Clifty Falls State Park. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, T. 4 N., R. 10 E. Drilled unused artesian well in limestone, diam 6 in, depth 69 ft. Lsd, 810 ft above msl. MP, edge of 1-in hole in steel plate cover, 0.51 ft above lsd. Highest water level 15.33 below lsd, Apr. 1, 1946; lowest 32.5 below lsd, Aug. 16, 1943. Records available: 1937-57.

Jan. 9, 1956	27.30	May 16, 1956	26.52	Sept. 11, 1956	27.00	Jan. 8, 1957	26.64
16	27.32	23	26.52	20	26.94	15	26.77
23	27.36	30	26.31	25	27.14	22	26.36
Feb. 1	27.24	June 7	26.24	Oct. 2	27.06	29	26.57
8	26.97	13	26.39	10	27.18	Feb. 5	26.59
15	26.92	20	26.32	16	26.94	12	26.26
22	26.73	26	26.44	23	27.10	19	26.29
29	26.72	July 3	26.47	30	26.93	26	26.09
Mar. 7	26.22	10	26.69	Nov. 6	27.05	Mar. 5	26.24
14	26.46	17	26.64	13	27.09	12	26.89
21	26.32	28	26.58	21	26.93	19	26.69
28	26.32	Aug. 1	26.79	27	27.24	26	26.29
Apr. 11	26.24	7	26.84	Dec. 4	27.26	Apr. 2	26.19
18	26.59	14	26.77	11	27.03	8	25.09
25	26.47	21	26.84	18	27.19	15	25.89
May 2	26.31	28	26.84	25	26.99	22	27.04
9	26.31	Sept. 4	27.00	Jan. 1, 1957	27.19	29	25.89

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Jf 2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 6, 1957	26.09	July 8, 1957	25.99	Sept. 9, 1957	26.75	Nov. 10, 1957	27.44
13	25.97	15	26.04	16	26.89	18	25.09
20	26.09	22	26.07	23	26.99	25	26.71
27	25.75	29	26.10	30	26.89	Dec. 2	26.74
June 3	25.69	Aug. 5	26.39	Oct. 7	26.99	9	26.50
10	26.31	12	26.34	14	26.98	16	26.59
17	26.05	19	26.39	21	26.39	23	26.39
24	25.83	26	26.69	28	26.49	30	26.19
July 1	25.89	Sept. 2	26.59	Nov. 4	27.34		

Kosciusko County

Ko 2. State of Indiana. Wawasee State Fish Hatchery. NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 25, T. 34 N., R. 7 E. Driven unused artesian well in till, diam 1 $\frac{1}{2}$  in, reported depth 87 ft. Lsd, 865 ft above msl. MP, top of pipe elbow, 1.00 ft below lsd. Highest water level 3.25 above lsd, May 1, 1944; lowest 1.05 above lsd. Jan. 2, 1954. Records available: 1938-39, 1942-57. Measurements by R. Tucker and Walter Koher.

Jan. 7, 1956	+1.67	June 16, 1956	+2.25	Nov. 17, 1956	+1.48	Aug. 2, 1957	+1.33
14	+1.58	23	+2.08	24	+1.50	10	+1.29
21	+1.60	30	+2.08	Dec. 1	+1.50	17	+1.17
28	+1.58	July 7	+2.08	8	+1.50	24	+1.19
Feb. 4	+1.54	14	+2.04	15	+1.50	31	+1.33
11	+1.58	21	+2.04	22	+1.54	Sept. 7	+1.12
18	+1.60	28	+2.00	29	+1.58	14	+1.21
25	+2.17	Aug. 4	+1.83	Apr. 20, 1957	+1.67	21	+1.33
Mar. 3	+2.00	11	+1.79	May 4	+1.67	28	+1.09
10	+1.87	18	+1.79	11	+1.96	Oct. 5	+1.25
17	+1.92	25	+1.79	18	+1.92	12	+1.20
24	+2.08	Sept. 1	+1.75	25	+1.83	19	+1.20
31	+1.71	8	+1.71	June 1	+1.71	26	+1.31
Apr. 7	+2.19	15	+1.58	15	+1.79	Nov. 2	+1.23
14	+2.17	22	+1.50	8	+1.79	9	+1.25
21	+2.21	29	+1.58	15	+1.81	16	+1.26
28	+2.21	Oct. 6	+1.54	22	+1.73	23	+1.29
May 5	+2.29	13	+1.50	29	+1.81	30	+1.27
12	+2.33	20	+1.50	July 1	+1.77	Dec. 7	+1.27
19	+2.33	27	+1.50	13	+1.58	14	+1.29
26	+2.25	Nov. 3	+1.50	20	+1.44	21	+1.62
June 2	+2.29	10	+1.50	27	+1.40	28	+1.67
9	+2.33						

La Porte County

Lp 2. State of Indiana. Kankakee State Game Preserve. SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 33 N., R. 3 W. Drilled unused artesian well in sand and gravel, diam 6 in, reported depth 115 ft. Lsd, 671 ft above msl. MP, 1-in hole in recorder platform, 1.36 ft above lsd. Highest water level 0.34 below lsd, Apr. 8, 1950; lowest 7.52 below lsd, July 25, 1955. Records available: 1942-57. Measurements by Herbert Busse and Harold Whetstone.

Jan. 2, 1956	5.25	May 21, 1956	2.74	Oct. 22, 1956	6.78	Mar. 11, 1957	5.60
9	5.42	28	3.22	29	6.68	18	5.63
16	5.48	June 4	3.68	Nov. 5	6.67	25	5.50
23	5.63	11	4.33	12	6.58	Apr. 1	5.55
30	5.75	18	4.66	19	6.51	8	4.87
Feb. 6	5.70	28	4.87	26	6.39	15	4.46
13	5.58	July 2	5.21	Dec. 3	6.35	22	4.30
20	5.34	9	5.38	10	6.30	29	3.30
27	4.53	16	5.60	17	6.25	May 6	3.33
Mar. 6	4.10	23	5.73	24	6.18	13	3.67
12	4.00	30	5.78	31	6.13	20	3.84
19	4.24	Aug. 6	5.98	Jan. 7, 1957	6.18	27	4.04
26	4.43	13	6.15	14	6.20	June 3	4.45
Apr. 2	4.52	27	6.30	21	5.94	10	4.72
9	4.64	Sept. 10	6.53	28	5.70	17	4.47
16	4.86	17	6.57	Feb. 4	5.74	24	4.65
23	5.14	24	6.73	11	5.60	30	4.54
30	4.30	Oct. 1	6.67	18	5.46	July 15	4.96
May 7	3.42	8	6.81	25	5.48	22	5.18
14	2.73	15	6.81	Mar. 4	5.56	28	5.37

Lp 2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 4, 1957	5.58	Sept. 17, 1957	6.28	Oct. 29, 1957	5.24	Dec. 2, 1957	4.39
11	5.55	23	6.31	Nov. 4	5.18	10	4.32
19	5.81	30	6.43	12	5.00	16	4.33
25	5.92	Oct. 7	6.48	18	4.25	23	3.33
Sept. 1	5.96	14	6.52	25	4.18	30	3.11
8	6.14	21	6.24				

Madison County

Md 7. State of Indiana. Mounds State Park.  $SE_1SW_4^1$  sec. 16, T. 19 N., R. 8 E. Driven unused artesian well in gravel, diam  $1\frac{1}{2}$  in, depth 19 ft. MP, top of pipe, 3.50 ft above lsd. Highest water level 3.35 above lsd, July 1, 1957; lowest 13.9 below lsd, Aug. 7, 1946. Records available: 1935-36, 1938-57. Measurements by Harry N. Stephens and Mr. Carter.

Jan. 3, 1956	5.48	June 18, 1956	1.52	Jan. 7, 1957	7.32	July 15, 1957	0.41
9	5.68	25	1.62	21	7.52	22	1.40
16	5.61	July 2	2.11	29	7.51	29	1.70
23	5.58	16	3.14	Feb. 4	7.51	Aug. 5	1.90
30	5.74	23	2.69	11	7.51	12	2.52
Feb. 6	5.56	Aug. 6	4.14	Mar. 4	7.35	18	2.98
13	5.47	13	4.14	11	7.35	26	3.30
20	4.98	20	4.35	18	7.32	Sept. 2	3.52
27	4.27	Sept. 3	4.69	25	7.30	9	3.70
Mar. 5	3.58	10	4.75	Apr. 1	7.32	16	4.00
12	3.61	17	4.69	8	5.92	23	4.20
19	3.56	Oct. 1	5.65	15	3.70	Oct. 6	4.67
26	3.56	8	5.70	22	2.60	14	5.02
Apr. 2	3.48	15	5.85	29	2.58	28	5.02
9	1.88	22	6.12	May 6	2.56	Nov. 4	5.20
16	1.85	29	6.32	13	2.34	12	5.35
23	2.48	Nov. 12	6.64	20	2.02	18	5.20
30	2.54	19	6.66	27	.80	25	5.20
May 7	2.55	26	6.72	June 3	1.00	Dec. 2	5.35
14	2.79	Dec. 3	6.90	10	1.30	9	5.10
21	3.14	10	7.00	17	+.90	16	5.00
28	1.09	17	7.12	24	+.30	23	3.10
June 4	+.29	24	7.20	July 1	+.35	30	2.15
11	.69	31	7.27	8	+1.33		

Marion County

Ma 2. Indiana National Bank. 130 East Washington St., Indianapolis.  $SW_4^1SW_4^1$  sec. 1, T. 15 N., R. 3 E. Drilled unused artesian well in gravel, diam 8 in, depth 90 ft. Lsd, 712.27 ft above msl. MP, top of casing, 24.00 ft below lsd. Highest water level 40.40 below lsd, Apr. 17, 1950 (previously reported as 40.43 below lsd, Apr. 18, 1950); lowest 70.55 below lsd, Sept. 21, 1941. Records available: 1935-57. Nearby well being pumped.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	44.87	43.07	41.92	41.60	42.11	43.42	47.17	48.59	49.23	46.63	45.46	42.99
10	44.58	42.88	(k)	41.48	41.97	.....	47.21	.....	48.75	46.83	44.71	43.51
15	44.34	42.84	41.85	41.37	43.74	.....	47.88	.....	49.06	46.55	44.09	42.89
20	43.90	42.52	41.62	(k)	(k)	46.58	47.66	.....	48.47	45.89	43.88	42.69
25	43.65	42.13	41.60	40.97	(k)	47.44	47.50	49.08	47.28	45.76	43.41	42.56
Eom	43.43	42.21	41.31	41.89	(k)	47.61	47.90	49.29	46.79	45.21	43.10	42.03

1957

5	41.92	41.22	40.69	40.77	43.72	(k)	46.46	48.94	49.00	46.10	43.44	(k)
10	41.72	41.18	40.67	40.80	43.72	42.99	47.35	48.87	47.72	45.69	e43.03	41.53
15	41.66	41.09	41.00	40.71	(k)	46.54	47.90	48.76	48.64	44.92	42.61	(k)
20	41.67	40.87	(k)	42.05	(k)	48.41	48.95	(k)	45.15	42.48	41.71	
25	41.45	40.67	40.61	43.37	45.02	46.26	48.36	49.19	47.55	44.60	42.07	41.84
Eom	41.34	40.96	41.08	44.21	43.74	46.74	48.29	49.35	46.46	43.50	41.97	41.10

e Estimated.

k Other measurements available near this date.

Ma 10. Federal Bldg. Meridian and Ohio Sts., Indianapolis.  $SW_4^1SW_4^1$  sec. 1, T. 15 N., R. 3 E. Drilled unused artesian well in limestone, diam 8 in, reported depth 304 ft. Lsd, 717.51 ft above msl. MP, top of casing, 10.00 ft below lsd. Highest water level 43.19 below lsd, Mar. 8, 1957; lowest 70.78 below lsd, Aug. 29, 1941. Records available: 1939-57. Nearby well being pumped.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Ma 10--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	47.31	July 9, 1956	52.84	Dec. 28, 1956	45.28	July 5, 1957	51.94
9	47.02	16	52.73	Jan. 7, 1957	44.32	12	52.60
16	46.59	23	52.97	21	43.89	19	53.16
23	46.20	30	53.36	25	43.87	26	53.28
30	46.02	Aug. 6	53.85	Feb. 1	43.93	Aug. 2	53.30
Feb. 6	45.37	13	54.17	8	43.53	9	53.25
13	45.25	20	54.49	15	43.68	16	53.95
20	45.09	27	54.08	22	43.51	23	53.98
27	44.60	31	55.16	Mar. 1	43.39	30	53.95
Mar. 5	44.42	Sept. 4	54.38	8	43.19	Sept. 6	53.61
12	44.64	10	55.13	15	43.44	13	53.06
19	44.40	17	50.88	22	43.21	20	53.54
26	43.98	24	50.77	29	43.63	27	53.94
Apr. 2	44.02	Oct. 1	49.03	Apr. 4	43.55	Oct. 4	48.60
9	44.15	8	48.37	12	43.42	11	47.97
16	43.83	15	47.68	19	44.47	18	47.48
23	43.53	22	48.17	26	49.29	25	46.79
30	44.17	29	48.85	May 3	46.42	Nov. 1	47.25
May 7	44.18	Nov. 5	50.91	10	48.36	8	45.55
14	44.24	12	46.71	20	47.70	15	45.25
21	47.25	19	46.31	24	49.94	22	45.08
28	45.60	26	45.63	31	49.22	27	44.24
June 4	45.73	Dec. 3	45.13	June 7	49.09	Dec. 6	44.25
11	50.68	10	45.68	14	51.20	13	44.37
18	52.39	17	46.12	24	51.82	20	43.69
25	53.14	21	45.22	28	52.04	27	43.77
July 2	53.19						

Ma 28. Manuel W. Rabourn. SW<sub>1</sub>NW<sub>1</sub> sec. 17, T. 14 N., R. 5 E. Dug unused artesian well in glacial drift, diam 42 in, depth 24 ft, cribbed with brick. Lsd, 819 ft above msl. MP, top of recorder base at 1-in hole, 2.32 ft above lsd. Highest water level 0.60 below lsd, Feb. 14, 1950 (previously reported as 1.29 below lsd, Jan. 27, 1950); lowest 17.06 below lsd, Oct. 11, 1954. Records available: 1947-57.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	8.60	(k)	4.87	7.54	6.74	(k)	8.55	9.79	11.61	12.95	13.00
10	(k)	7.20	7.46	4.85	7.91	6.89	(k)	8.76	10.15	(k)	13.10	.....
15	8.77	6.38	7.86	5.22	8.23	7.24	7.39	8.93	(k)	12.12	e13.22	.....
20	9.05	....	7.03	5.91	8.58	7.63	7.67	8.92	10.76	12.35	13.33	9.10
25	9.34	6.01	7.27	6.60	8.88	7.91	7.98	9.00	11.06	12.57	13.19	(k)
Eom	9.12	6.52	7.77	7.10	7.32	8.15	8.30	9.42	11.33	12.79	13.10	7.07

1957

5	7.37	5.37	(k)	(k)	6.27	3.09	(k)	7.70	9.31	10.40	....	8.66
10	6.90	3.17	6.29	1.45	e6.07	4.46	4.67	8.14	9.46	(k)	....	6.56
15	(k)	2.77	5.84	2.90	4.83	5.42	5.34	e5.51	9.71	10.97	11.08	....
20	7.35	4.12	5.99	3.51	3.72	6.25	5.99	8.79	9.93	11.12	9.90	....
25	4.97	5.13	....	4.48	1.80	6.82	6.61	9.07	10.09	11.21	6.28	....
Eom	5.27	....	5.19	e4.43	3.75	6.42	7.24	9.15	10.25	....	....	2.57

e Estimated.

k Other measurements available near this date.

Martin County

Mt 3. John Ketcham. NW<sub>1</sub>NW<sub>1</sub> sec. 12, T. 4 N., R. 5 W. Dug unused water-table well in rock, diam 42 in, depth 32 ft, cribbed with stone. Lsd, 621 ft above msl. MP, edge of hole in iron plate, 0.70 ft above lsd. Highest water level 18.02 below lsd, June 2, 1947; lowest 24.27 below lsd, Dec. 26, 1954. Records available: 1944-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1, 1956	22.69	Mar. 4, 1956	20.84	May 13, 1956	20.38	July 15, 1956	22.78
8	22.72	11	20.09	20	20.43	22	21.87
15	22.74	18	20.07	28	20.48	29	21.89
22	22.77	25	19.89	June 3	20.59	Aug. 5	21.99
29	22.75	Apr. 1	19.87	10	20.63	13	22.07
Feb. 5	21.69	8	19.92	17	20.99	19	22.09
12	21.88	15	19.94	24	21.08	26	23.09
19	21.47	22	20.09	July 1	21.33	Sept. 2	22.69
26	20.88	May 6	20.34	8	21.64	9	22.45

## Mt 3--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 16, 1956	22.37	Dec. 23, 1956	22.93	Mar. 31, 1957	22.99	July 7, 1957	20.38
23	22.41	30	22.95	Apr. 7	21.94	14	20.49
30	22.47	Jan. 6, 1957	22.98	14	21.34	21	20.97
Oct. 7	22.51	13	23.99	21	21.09	28	21.33
13	22.58	20	23.25	28	21.28	Aug. 4	21.36
21	22.65	27	22.89	May 5	20.84	11	21.61
28	22.69	Feb. 3	22.84	12	20.86	18	21.72
Nov. 4	22.75	10	22.86	19	20.97	25	21.91
11	22.88	17	22.85	26	19.37	Sept. 1	22.02
19	22.87	24	22.89	June 2	19.61	8	22.06
25	22.86	Mar. 3	22.91	9	19.58	15	22.09
Dec. 2	22.93	10	22.94	16	19.39	22	22.13
9	22.99	17	22.95	23	19.95	29	22.42
16	22.89	24	22.96	30	19.71		

Montgomery County

My 1. Byron Banta. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 36, T. 17 N., R. 6 W. Dug unused water-table well in glacial drift, diam 36 in, depth 18 ft, cribbed with brick. On Aug. 25, 1955, an 8-in steel casing was set to a depth of 18 ft and well backfilled with crushed rock. Lsd, 765 ft above msl. MP, inner manhole ring at painted arrow, 1.16 ft above lsd. Highest water level 3.37 below lsd, Jan. 4, 1950; lowest 15.45 below lsd, Nov. 16, 1940. Records available: 1935-57.

## 2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	10.58	10.85	7.55	7.04	....	7.90	10.55	11.24	11.72	13.02	13.59	12.65
10	10.74	9.35	7.20	7.05	8.75	(k)	....	11.52	11.90	13.27	13.41	9.81
15	10.83	(k)	7.95	7.56	9.35	9.97	....	11.39	12.16	13.34	13.39	9.99
20	11.05	....	7.53	(k)	9.84	10.33	9.98	11.36	12.32	13.40	13.22	(k)
25	11.24	....	8.13	9.34	9.79	10.40	10.52	11.64	12.50	13.51	12.33	9.37
Eom	11.32	6.90	8.61	....	7.09	10.16	11.13	11.68	12.70	13.37	12.57	9.48

1957												
5	10.21	9.73	8.20	5.54	8.74	8.60	6.10	9.91	11.58	12.24	....	10.11
10	(k)	(k)	(k)	5.91	9.32	....	7.90	10.37	11.84	12.47	10.87	8.02
15	10.08	(k)	9.45	(k)	9.18	....	8.50	10.16	11.93	12.56	9.15	9.16
20	10.49	(k)	9.38	7.66	8.90	6.97	9.28	10.81	12.06	12.22	8.33	4.71
25	7.76	9.28	9.35	6.75	7.29	(k)	9.90	11.10	11.69	10.39	....	6.91
Eom	....	(k)	8.43	7.85	8.46	4.20	10.44	11.34	11.95	(k)	9.64	6.83

k Other measurements available near this date.

Morgan County

Mg 3. State of Indiana. Morgan-Monroe State Forest. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 11 N., R. 1 E. Drilled unused artesian well in rock, diam 8 in, depth 45 ft. Lsd, 670 ft above msl. MP, edge of hole in pump base, 0.47 ft above lsd. Highest water level 1.75 below lsd, Dec. 18, 1950; lowest 12.93 below lsd, Sept. 30, 1956. Records available: 1945-57. Measurements by Joseph Scales and Julian Rogers.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 24, 1956	5.90	Juhe 22, 1956	5.63	Nov. 19, 1956	4.13	Apr. 24, 1957	5.43
Mar. 2	6.54	July 6	7.53		26	May 8	7.03
16	6.73	20	7.53	Dec. 6	7.63	20	7.13
23	5.97	30	7.44	10	6.73	June 5	7.23
Apr. 6	5.53	Aug. 3	8.73		6.13	21	7.73
13	5.57	10	7.33	Jan. 15, 1957	7.83	July 19	8.13
20	6.29	31	7.83	21	6.93	25	7.73
28	6.27	Sept. 14	8.03	Feb. 4	6.33	Sept. 25	7.13
May 4	6.03	21	7.03	22	5.93	Oct. 25	6.43
11	6.03	30	12.93	Mar. 8	7.23	Nov. 5	6.23
20	6.28	Oct. 4	7.53	Apr. 1	5.43	Dec. 3	5.83
25	6.63	29	9.03	8	6.13	23	5.23
June 1	5.53	Nov. 5	6.13	17	6.13	31	5.33
8	6.46						

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Owen County

Ow 5. David R. Bronson. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 30, T. 12 N., R. 4 W. Dug unused artesian well in sandy clay, diam 26 in, depth 19 ft, cribbed with stone. MP, top of plank cover at painted arrow, 0.04 ft above lsd. Highest water level 1.06 below lsd, Jan. 14, 1950, Dec. 26, 1957; lowest 13.72 below lsd, Feb. 23, 1954. Records available: 1946-57. Measurements by Stanley Heiliger and L. Linley.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6, 1956	6.36	Sept. 26, 1956	9.71	May 15, 1957	4.53	Sept. 4, 1957	8.86
18	7.96	Oct. 3	9.91	22	1.45	11	9.62
Feb. 1	7.96	Nov. 29	11.76	.29	2.04	18	9.38
21	2.46	Feb. 13, 1957	2.12	June 4	1.86	25	9.60
29	1.71	20	2.63	11	2.75	Oct. 1	9.73
Mar. 19	1.96	27	2.10	18	2.81	9	9.96
Apr. 11	1.86	Mar. 7	2.51	26	3.58	16	10.06
25	3.46	13	2.58	July 3	2.96	30	10.36
May 11	3.96	20	1.81	10	4.32	Nov. 6	10.56
June 1	1.67	27	1.36	17	5.56	13	10.66
29	6.65	Apr. 3	1.35	24	6.26	21	7.66
July 27	8.46	10	1.21	31	6.64	27	4.36
Aug. 28	9.46	17	1.74	Aug. 7	7.61	Dec. 4	4.61
Sept. 5	9.66	24	1.88	14	7.96	11	2.66
12	9.46	May 1	2.59	21	8.31	18	1.66
19	9.96	8	3.81	28	8.56	26	1.06

Pike County

Pi 1. A. J. Heuring. Lafayette and Main Sts., Winslow. NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, T. 1 S., R. 7 W. Dug and drilled unused artesian well in rock, diam 36 to reported 6 in, depth 25 ft. Lsd, 468 ft above msl. MP, edge of hole in concrete cover, 1.00 ft above lsd. Highest water level 3.25 below lsd, Mar. 20, 1951; lowest 13.55 below lsd, Dec. 15, 1954. Records available: 1936-57. Measurements by Malcolm F. Nixon.

Jan. 4, 1956	9.30	July 4, 1956	7.14	Jan. 1, 1957	9.3	July 3, 1957	6.45
11	9.60	11	8.30	9	9.2	10	6.75
18	9.75	18	8.55	16	9.25	17	7.03
25	9.70	25	8.75	23	9.00	24	7.01
Feb. 1	9.43	Aug. 1	8.90	30	9.00	31	7.30
8	8.43	8	9.13	Feb. 6	8.00	Aug. 7	7.22
15	7.85	15	9.36	13	7.35	14	7.51
22	6.38	22	9.00	20	7.35	21	7.92
29	5.52	29	9.20	27	7.40	28	8.33
Mar. 7	5.90	Sept. 5	9.52	Mar. 6	7.40	Sept. 4	8.67
14	5.45	12	9.90	13	7.50	11	8.95
21	5.40	19	9.77	20	7.40	18	8.97
28	4.90	26	9.85	27	7.50	25	9.00
Apr. 4	4.70	Oct. 3	9.75	Apr. 3	7.30	Oct. 2	9.24
11	5.65	10	10.05	10	5.70	9	9.46
18	5.60	17	10.20	17	6.00	16	9.73
25	6.30	24	10.30	24	5.82	23	9.70
May 2	6.00	31	10.45	May 1	6.10	30	9.58
9	4.85	Nov. 7	10.55	8	6.65	Nov. 6	9.62
16	5.20	14	10.60	15	7.05	13	9.58
23	5.40	21	10.60	22	7.20	20	8.45
30	5.55	28	10.70	29	6.15	27	7.97
June 6	5.61	Dec. 5	10.48	June 5	6.30	Dec. 4	7.67
13	5.82	12	10.25	12	6.40	11	7.40
20	6.30	19	10.00	19	6.30	18	7.27
27	7.10	26	9.55	26	6.40	25	6.13
28	7.25						

Posey County

Py 2. Mary M. Wade. NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 5 S., R. 12 W. Drilled unused artesian well in rock, diam 6 in, depth 236 ft. MP, edge of 1-in hole in recorder base, 2.81 ft above lsd. Highest water level 3.03 below lsd, June 4, 1952; lowest 14.95 below lsd, Nov. 30, Dec. 6, 1954. Records available: 1947-57.

## INDIANA, RANDOLPH COUNTY

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By 2--Continued.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	13.60	14.10	11.60	9.10	7.80	....	7.70	8.75	10.15	11.55	12.90	13.45
10	13.75	13.95	11.30	8.70	7.60	....	7.90	9.00	10.45	12.00	12.90	13.85
15	13.65	13.50	10.80	8.05	(k)	....	8.05	9.15	10.40	12.00	12.90	13.55
20	13.90	13.45	10.50	8.45	7.60	7.35	8.20	9.35	10.75	12.15	13.15	13.65
25	14.05	12.05	10.00	8.25	7.50	7.40	8.40	9.65	11.00	12.40	12.90	13.65
Eom	14.55	12.35	9.45	8.10	7.20	7.55	8.65	9.65	11.15	12.60	13.35	13.30

1957

5	13.70	12.85	....	e7.00	(k)	....	....	6.00	7.00	8.75	10.10	9.00
10	13.50	12.10	....	(k)	(k)	....	....	e6.00	7.25	e9.15	10.60	8.35
15	13.60	11.75	e9.70	....	6.20	....	....	6.10	7.50	....	9.95	8.25
20	13.75	11.35	9.20	6.80	(k)	....	....	(k)	7.75	9.70	9.80	(k)
25	e13.30	e10.85	8.60	6.55	e5.80	....	e5.70	....	8.20	9.65	9.60	(k)
Eom	12.90	....	8.75	6.50	....	....	5.65	6.90	8.50	9.70	9.15	6.95

e Estimated.

k Other measurements available near this date.

Pulaski County

Pu 1. State of Indiana. Jasper-Pulaski State Game Preserve. SW<sub>4</sub>NE<sub>4</sub> sec. 18, T. 31 N., R. 4 W. Drilled unused artesian well in rock, diam 4 in, reported depth 149 ft, cased to 60. Lsd, 706 ft above msl. MP, east side inner lip of manhole ring, at lsd. Highest water level 4.23 below lsd, Oct. 20, 1954, Jan. 12, 1955; lowest 12.14 below lsd, Dec. 1, 1935. Records available: 1935-42, 1944-57. Measurements by George McCormick.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4, 1956	8.98	June 13, 1956	8.00	Nov. 14, 1956	10.96	Apr. 23, 1957	8.91
10	9.14	18	7.97	21	10.95	May 1	7.94
18	9.14	27	6.93	28	10.94	8	7.93
25	9.18	July 5	7.00	Dec. 5	10.94	15	6.99
Feb. 1	9.21	11	7.10	12	10.98	22	6.96
8	9.26	18	8.98	26	10.97	31	6.98
15	9.30	25	8.94	Jan. 2, 1957	10.92	June 5	7.00
22	9.10	Aug. 1	8.96	9	10.95	12	7.91
28	8.94	8	8.98	16	10.96	July 3	7.92
Mar. 7	8.00	15	8.97	23	10.97	10	7.93
14	7.98	22	8.96	30	10.94	17	7.07
21	7.96	29	8.98	Feb. 6	10.92	24	7.90
28	7.94	Sept. 5	9.96	13	10.91	Sept. 6	8.94
Apr. 4	7.98	12	9.92	20	10.90	19	8.94
11	8.00	19	10.92	Mar. 6	9.96	23	8.95
25	8.92	26	10.94	13	9.96	Oct. 3	8.96
May 2	8.00	Oct. 3	10.00	20	9.95	Nov. 6	7.60
8	7.97	10	10.92	27	9.93	13	7.93
16	7.94	17	10.94	Apr. 3	9.93	21	7.00
23	7.91	24	10.91	10	9.00	Dec. 6	7.91
31	7.00	31	10.94	17	8.95	20	6.97
June 7	7.35	Nov. 7	10.96				

Randolph County

Ra 1. Artie V. Keys. SE<sub>4</sub>NE<sub>4</sub> sec. 26, T. 20 N., R. 14 E. Drilled domestic artesian well in limestone, diam 4 in, depth 157 ft, cased to 148. MP, top northwest side of pipe, 5.87 ft below lsd. Highest water level 12.08 below lsd, Jan. 31, 1949; lowest 18.43 below lsd, Jan. 31, 1945. Records available: 1942-57. Measurements by owner.

Jan. 15, 1956	14.66	July 15, 1956	14.97	Jan. 15, 1957	17.55	July 15, 1957	13.67
31	15.04	31	15.59	31	16.47	31	14.20
Feb. 15	13.17	Aug. 15	16.09	Feb. 15	14.88	Aug. 15	14.96
29	12.94	31	16.41	28	14.55	31	15.63
Mar. 15	13.65	Sept. 15	16.76	Mar. 15	14.49	Sept. 15	15.97
31	12.93	30	17.25	31	14.77	30	16.35
Apr. 15	12.95	Oct. 15	17.53	Apr. 15	12.88	Oct. 15	16.64
30	13.67	31	17.61	30	12.90	31	16.47
May 15	13.88	Nov. 15	17.77	May 15	13.67	Nov. 15	16.30
31	14.18	30	17.97	31	13.28	30	15.71
June 15	14.57	Dec. 15	17.59	June 15	13.48	Dec. 15	14.73
30	14.60	31	17.53	30	13.04	31	13.00

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

St. Joseph County

Sj 1. City of Mishawaka. Mishawaka Water & Light Dept. Virgil and Linden Sts. SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 11, T. 37 N., R. 3 E. Driven unused water-table well in sand, diam 1 $\frac{1}{4}$  in, depth 40 ft. MP, top of coupling on pipe, 0.50 ft above lsd. Highest water level 4.46 below lsd, May 25, 1943; lowest 17.70 below lsd, Oct. 15, 1956. Records available: 1935-57. Measurements by personnel of Mishawaka Water & Light Dept. Nearby well being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16, 1956	12.66	June 16, 1956	16.50	Nov. 15, 1956	13.60	May 1, 1957	7.40
Feb. 1	12.70	July 1	16.50	Dec. 1	13.00	15	8.10
15	10.60	16	16.40	16	16.40	June 1	8.25
Mar. 1	11.33	Aug. 1	17.05	Jan. 15, 1957	12.75	15	8.80
16	13.30	15	16.80	Feb. 1	12.71	July 1	9.12
Apr. 1	13.00	Sept. 4	15.10	15	11.65	15	9.90
16	13.70	15	15.00	Mar. 1	10.34	Aug. 1	10.88
May 1	11.06	30	15.60	16	8.20	15	13.34
16	11.50	Oct. 15	17.70	Apr. 1	7.90	Sept. 1	14.30
June 1	14.34	Nov. 2	15.65	15	6.66		

Spencer County

Sp 6. State of Indiana. Lincoln State Park. SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 5, T. 5 S., R. 5 W. Drilled unused artesian well in rock, diam 4 in, reported depth 83 ft. MP, top west side of casing, 0.20 ft above lsd. Highest water level 21.52 below lsd, Mar. 21, 1951; lowest 31.75 below lsd, Oct. 6, 1954. Records available: 1944-57. Measurements by personnel of Lincoln State Park.

	Jan. 5, 1956	July 24, 1956	28.50	Jan. 29, 1957	28.90	July 16, 1957	24.60
	11	26.96	31	28.90	Feb. 5	27.40	24
	18	26.96	Aug. 8	29.10	12	27.00	31
	25	26.96	15	29.30	17	26.10	Aug. 7
Feb. 1	26.83	22	29.50	26	25.90	13	27.30
8	25.78	Sept. 4	29.90	Mar. 4	25.10	20	27.40
15	25.28	11	30.10	11	24.90	28	27.60
22	25.05	18	30.10	18	24.30	Sept. 3	28.40
29	23.40	25	30.30	25	24.20	10	28.20
Mar. 7	24.55	Oct. 2	30.40	Apr. 1	23.90	15	28.90
14	24.35	9	30.00	8	22.90	24	29.00
21	23.90	16	30.40	15	22.60	Oct. 1	29.10
28	23.60	23	30.50	22	22.20	8	29.30
Apr. 4	23.70	29	30.60	29	22.40	14	29.60
11	23.70	Nov. 7	30.50	May 6	22.70	23	29.40
18	23.45	23	29.90	14	22.10	27	29.70
25	23.50	26	29.90	21	22.90	Nov. 7	29.60
May 2	23.60	Dec. 4	29.90	27	23.30	12	30.70
9	23.78	11	29.90	June 4	23.20	18	29.00
21	23.70	18	29.00	11	23.50	26	27.90
30	24.90	24	29.50	17	22.90	Dec. 2	27.70
June 27	26.85	31	29.30	24	23.30	9	25.90
July 4	28.30	Jan. 8, 1957	29.20	July 2	21.90	16	26.30
11	27.55	15	29.10	9	23.50	26	25.05
18	28.25	22	28.90				

Steuben County

Sb 1. State of Indiana. Pokagon State Park. SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, T. 38 N., R. 13 E. Driven unused artesian well in gravel, diam 1 $\frac{1}{4}$  in, depth 14 ft. Lsd, 1,004 ft above msl. MP, top of pipe, 2.00 ft above lsd. Highest water level 1.01 above lsd, Apr. 1, 1950; lowest 5.77 below lsd, Jan. 16, 1954. Records available: 1935-57. Measurements by personnel of Pokagon State Park.

	Jan. 4, 1956	Mar. 28, 1956	.58	June 27, 1956	0.89	Sept. 19, 1956	3.35
	11	2.12	Apr. 4	.33	July 5	1.36	26
	18	2.25	11	.34	12	1.70	Oct. 3
	25	2.34	18	.64	18	1.80	10
Feb. 1	2.36	25	.80	25	1.92	17	4.04
8	2.41	May 3	+.43	Aug. 1	2.20	24	4.14
15	1.97	11	+.49	9	2.51	31	4.14
22	1.90	17	+.98	15	2.46	Nov. 7	4.20
29	1.05	23	+.41	23	2.33	14	4.18
Mar. 7	.30	31	+.20	29	2.69	28	4.09
14	.47	June 13	.54	Sept. 5	2.88	Dec. 5	4.09
21	.63	20	.83	12	3.09	12	4.00

## INDIANA, TIPPECANOE COUNTY

29

Sb 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 19, 1956	3.81	Mar. 13, 1957	1.83	June 4, 1957	1.24	Aug. 29, 1957	3.66
26	3.46	20	1.76	11	1.42	Sept. 9	4.05
Jan. 2, 1957	3.44	27	1.86	18	1.37	18	4.24
9	3.49	Apr. 3	1.75	26	1.70	27	4.33
16	3.59	11	.54	July 2	1.28	Oct. 12	4.58
24	3.76	17	.57	9	1.14	19	4.56
30	2.76	24	.75	16	1.64	28	3.87
Feb. 6	2.84	30	.69	23	1.96	Nov. 6	3.86
15	2.38	May 6	1.00	30	2.42	20	2.46
20	2.31	14	.50	Aug. 6	2.79	Dec. 5	2.43
27	1.78	21	.60	15	3.35	30	1.03
Mar. 6	1.88	28	.35	22	3.57		

## Switzerland County

Sw 1. Walker Estate. SE<sub>4</sub>NE<sub>4</sub> sec. 8, T. 2 N., R. 1 W. Dug domestic water-table well in sandy clay, diam 4 ft, depth 24 ft. MP, top north side of 3-in concrete curb, 1.00 ft above lsd. Highest water level 2.40 below lsd, Feb. 18, 1956; lowest 21.90 below lsd, Dec. 2, 15, 1944. Records available: 1944-57.

Jan. 6, 1956	16.80	June 29, 1956	9.30	Jan. 4, 1957	16.90	July 12, 1957	11.00
13	17.80	July 6	12.70	12	14.80	19	14.40
21	17.40	13	14.70	Feb. 2	11.20	26	15.65
28	17.60	21	15.80	8	10.10	Aug. 2	16.30
Feb. 4	5.50	27	16.80	15	8.00	15	16.50
10	7.50	Aug. 11	17.10	22	11.90	23	17.20
18	2.40	17	17.40	Mar. 1	7.60	31	17.40
25	4.90	31	17.70	8	9.40	Sept. 7	17.70
Mar. 3	6.70	Sept. 8	17.80	16	10.00	13	17.80
10	4.00	15	17.50	23	12.10	19	17.50
17	5.60	22	16.10	31	12.70	27	17.40
24	6.80	29	16.50	Apr. 5	2.50	Oct. 4	17.70
Apr. 2	11.40	Oct. 5	16.50	12	4.10	19	17.70
6	9.30	13	16.90	18	8.30	27	17.30
13	10.20	19	17.30	26	10.10	Nov. 3	17.50
20	12.50	26	17.50	May 6	13.90	9	16.40
28	14.40	Nov. 2	17.70	10	14.80	18	3.70
May 5	15.30	10	17.90	24	11.80	23	7.70
11	15.90	17	17.90	June 3	13.50	30	10.90
19	16.30	24	17.90	8	14.70	Dec. 7	5.80
25	16.70	Dec. 7	18.10	13	15.60	14	8.30
June 2	14.60	14	17.30	22	16.00	19	8.90
9	15.30	21	17.20	July 4	12.50	20	4.90
14	16.10	29	16.90	6	4.70	28	4.80
24	15.60						

## Tippecanoe County

Tc 7. State of Indiana, Purdue University Research Housing Project. SE<sub>4</sub>SE<sub>4</sub> sec. 13, T. 23 N., R. 5 W. Drilled unused water-table well in sand and gravel, diam 8 in, depth 207 ft. Lsd, 679 ft above msl. MP, top of concrete pump base, 0.80 ft above lsd. Highest water level 159.57 below lsd, May 5, 14, 1950 (previously reported as 159.61 below lsd, May 15, 1950); lowest 168.31 below lsd, Nov. 8, 1956. Records available: 1945-57.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	166.33	166.45	166.33	166.26	166.21	166.36	166.64	166.94	167.29	167.69	.....	167.81
10	166.34	166.53	166.53	166.23	166.13	166.36	166.72	167.18	167.31	167.91	168.12	167.81
15	166.36	166.55	166.55	166.00	166.24	166.45	166.79	167.18	167.30	167.93	167.93	167.81
20	166.54	166.58	(k)	166.35	166.40	166.43	166.82	167.17	167.49	167.96	167.97	167.81
25	166.45	166.16	166.32	166.25	166.52	166.52	166.84	(k)	167.50	168.11	167.57	167.77
Eom	166.63	166.58	166.30	166.34	166.59	166.93	(k)	167.55	.....	167.85	167.53	

1957

5	167.63	167.66	167.58	167.42	167.22	166.54	166.45	(k)	165.72	166.22	166.20	166.03
10	167.79	167.61	167.60	167.70	167.11	166.50	166.42	.....	165.61	166.27	166.54	165.69
15	167.62	167.69	167.60	167.57	167.05	166.63	166.26	(k)	165.51	166.13	166.34	166.00
20	167.61	167.70	167.58	167.41	166.85	166.55	166.39	165.83	165.78	166.41	166.23	165.54
25	167.59	167.43	167.45	167.28	166.84	166.46	166.38	165.75	165.92	166.39	166.21	165.72
Eom	167.51	167.55	167.69	167.25	166.68	166.48	166.11	165.75	165.98	166.28	166.06	.....

k Other measurements available near this date.

Vanderburgh County

Va 1. Flora Buente. NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 8, T. 5 S., R. 11 W. Dug unused well, diam 42 in, depth 20 ft, cribbed with brick. MP, top of plank cover at painted arrow, 0.77 ft above lsd. Highest water level 0.19 below lsd, Mar. 18, 1951; lowest 14.29 below lsd, Feb. 13, 1955. Records available: 1947-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1, 1956	11.63	June 28, 1956	10.91	Jan. 6, 1957	11.93	July 7, 1957	8.29
8	11.74	July 1	10.95	13	11.95	14	8.49
15	11.87	8	11.06	20	11.95	21	11.68
22	11.98	15	11.18	27	11.92	28	8.78
29	12.10	22	11.15	Feb. 3	11.56	Aug. 4	8.87
Feb. 5	12.08	29	11.20	10	11.37	11	8.97
12	12.18	Aug. 5	11.23	17	11.23	17	9.09
19	12.17	12	11.38	24	11.07	25	9.19
26	12.00	26	11.32	Mar. 3	10.88	Sept. 1	9.26
Mar. 4	12.03	Sept. 2	11.40	10	10.72	8	9.35
11	11.89	9	11.56	17	10.56	15	9.44
18	11.81	16	11.67	24	10.48	22	9.57
25	11.53	23	11.53	31	10.42	29	9.86
Apr. 1	11.19	30	11.58	Apr. 7	10.17	Oct. 6	9.91
8	11.09	Oct. 7	11.66	14	9.96	13	10.06
15	10.89	14	11.71	21	9.55	20	10.08
22	10.77	21	11.79	28	9.21	27	10.07
29	10.63	28	11.83	May 5	9.21	Nov. 3	10.22
May 6	10.56	Nov. 4	11.81	12	9.14	10	10.20
13	10.58	11	11.87	19	8.94	17	9.98
20	10.62	18	11.84	26	5.38	24	9.88
27	10.48	25	11.83	June 2	6.39	Dec. 1	9.91
June 3	10.61	Dec. 2	11.87	9	6.85	15	9.63
10	10.68	9	11.82	16	6.73	22	7.87
17	10.83	23	11.86	23	7.14	29	6.61
24	10.90	30	11.90	30	7.72		

Wayne County

We 1. C. E. Rodenberg. Pershing. NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 16 N., R. 12 E. Dug unused water-table well in gravel, diam 42 in, depth 33 ft, cribbed with brick. Lsd, 957 ft above msl. MP, top of plank cover at opening for pump, 0.10 ft above lsd. Highest water level 24.60 below lsd, Feb. 27, 1950; lowest 32.18 below lsd, Dec. 20, 1954. Records available: 1945-57.

Jan. 10, 1956	30.14	Aug. 20, 1956	30.02	Feb. 11, 1957	31.92	June 26, 1957	29.49
23	30.29	28	30.16	21	31.90	July 3	29.04
Feb. 20	30.74	Sept. 11	30.44	Mar. 6	31.95	29	28.83
27	29.64	19	30.59	19	32.00	Aug. 21	29.28
Mar. 6	29.26	Oct. 3	30.80	Apr. 2	31.98	26	29.40
19	29.02	10	30.90	8	31.57	Sept. 9	29.68
Apr. 4	28.90	16	30.96	15	31.16	17	29.85
10	28.53	23	30.08	22	30.91	24	30.06
22	28.13	Nov. 7	31.25	May 1	30.52	Oct. 8	30.24
May 16	28.47	19	31.38	7	30.40	15	30.37
June 4	28.45	Dec. 5	31.53	15	30.32	22	30.48
26	28.90	12	31.56	22	30.26	Nov. 13	30.79
July 3	29.02	Jan. 7, 1957	31.75	27	29.99	26	30.89
31	29.63	22	31.53	June 11	29.60	Dec. 17	31.07
Aug. 8	29.80	29	31.89	18	29.54		

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## MAINE

By G. C. Prescott

Figure 5 shows the location of observation wells in Maine.

### Well-Numbering System

Wells are designated by abbreviations derived from county names and serial numbers assigned within each county.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum.

#### Aroostook County

Ar 1. H. L. Stevens. Portage Lake. Lat  $46^{\circ}46'19''$ , long  $68^{\circ}28'04''$ . Dug unused water-table well in sand, diam 28 in, depth 8 ft (previously reported 11 ft; bottom full of sand and trash). Lsd, about 930 ft above msl. MP, top of 2 x 4 timber driven into bottom of well, at lsd. Highest water level flowing, Dec. 21, 1957; dry several times, 1947-48, 1950, 1952-53, 1955-57. Records available: 1942-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 4, 1956	9.40	Oct. 1, 1956	7.50	Apr. 11, 1957	2.20	Oct. 14, 1957	(f)
June 30	4.33	Nov. 23	3.20	July 12	6.25	Dec. 27	0.00

f Dry.

Ar 2. Truman P. Young. Formerly C. C. Young. Sherman Mills. Lat  $45^{\circ}56'11''$ , long  $68^{\circ}19'01''$  (previously reported as lat  $45^{\circ}55'01''$ , long  $68^{\circ}20'04''$ ). Dug and drilled unused water-table well, 12 ft in sand, 19 ft in bedrock, diam 28 to 8 in, depth 31 ft. Lsd, about 710 ft above msl. MP, horizontal staple in 2 x 4 block, 2.32 ft above lsd. Highest water level overflowing nearly every spring; lowest 17.48 below lsd, Oct. 25, 1953. Records available: 1939-57.

Apr. 1, 1956, 6.85; July 1, 12.98; Sept. 30, 12.45; Apr. 13, 1957, 1.39; July 7, 14.16; Oct. 13, 14.70; Dec. 29, 1.18.

#### Hancock County

H 1. George C. Orcutt. Amherst. Lat  $44^{\circ}49'50''$ , long  $68^{\circ}22'06''$ . Dug unused water-table well in glacial drift, diam 18 in, depth 14 ft. Lsd, about 330 ft above msl. MP, top of 2 x 4 timber driven into bottom of well, at lsd. Highest water level 2.81 below lsd, Nov. 27, 1950; dry several times, 1944, 1948-49, 1952, 1955, 1957. Records available: 1943-57.

Apr. 1, 1956	6.39	Sept. 30, 1956	11.89	Mar. 31, 1957	6.26	Sept. 29, 1957	(f)
July 1	7.62	Dec. 31	5.69	June 30	9.52	Dec. 29	4.02

f Dry.

#### Somerset County

Sm 1. J. Harrison Farrand. Mercer. Lat  $44^{\circ}42'10''$ , long  $69^{\circ}55'12''$ . Dug unused water-table well in sand, diam 5 ft, depth 14 ft. Lsd, about 270 ft above msl. MP, top of 2 x 4 timber driven into bottom of well, at lsd. Highest water level 4.27 below lsd, Apr. 11, 1955; dry several times, 1952-53. Records available: 1942-57.

Apr. 2, 1956	6.54	Sept. 30, 1956	6.25	Mar. 31, 1957	5.21	Sept. 29, 1957	10.27
July 1	6.70	Dec. 30	6.00	June 30	7.19	Dec. 29	4.72

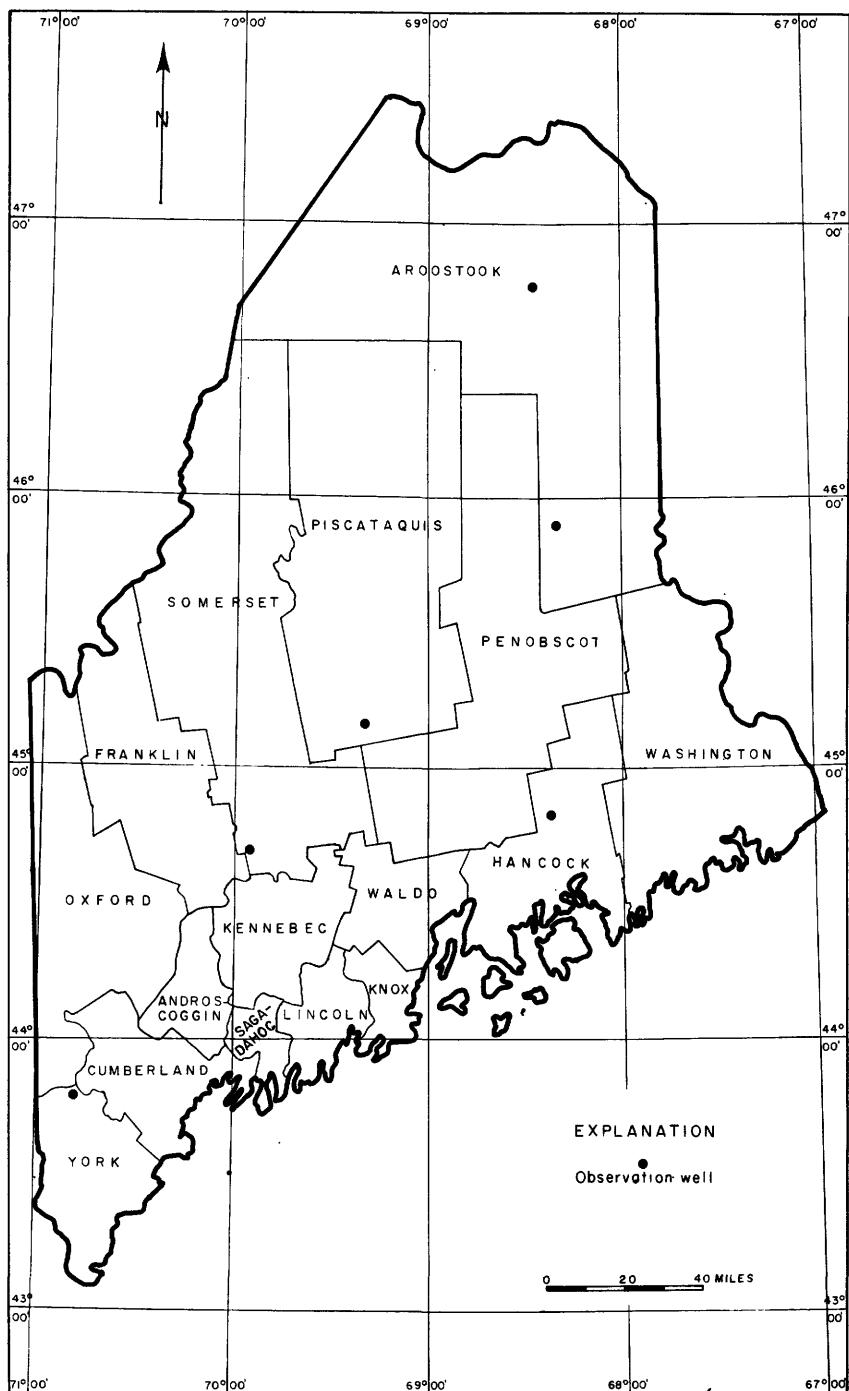


Figure 5.--Location of observation wells in Maine, 1956-57.

York County

Y 1. J. P. Small. Cornish. Lat  $43^{\circ}48'22''$ , long  $70^{\circ}48'25''$ . Dug unused water-table well in sandy glacial drift, diam 36 in, depth 24 ft. Lsd, about 370 ft above msl. MP, mark chiseled on top of concrete well curb, at lsd. Highest water level 7.90 below lsd, Apr. 6, 1952; lowest 18.40 below lsd, Nov. 14, 1948. Records available: 1943-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 1, 1956	14.10	Sept. 30, 1956	14.20	Mar. 31, 1957	10.8	Sept. 29, 1957	17.3
July 1	12.50	Dec. 30	11.20	June 30	13.6	Dec. 29	9.1

## MASSACHUSETTS

By E. A. Sosson

The observation-well program was continued during 1956 and 1957 in cooperation with the Massachusetts Department of Public Works. Figure 6 shows the location of observation wells included in this report.

### Well-Numbering System

Wells are designated by town or city names and serial numbers assigned within each town or city.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum.

#### Barnstable County

Falmouth 5. Town of Falmouth. Lat  $41^{\circ}34'49''$ , long  $70^{\circ}32'24''$ . Driven unused water-table well in glacial drift, diam  $2\frac{1}{2}$  in, depth 50 ft. Lsd, about 8 ft above msl. MP, top of casing, at lsd. Highest water level 2.65 below lsd, Apr. 30, 1956; lowest 5.46 below lsd, Sept. 2, 1950. Records available: 1950-57. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 31, 1956	2.97	Oct. 1, 1956	4.84	Apr. 1, 1957	3.94	Oct. 1, 1957	5.28
Apr. 30	2.65	Dec. 3	5.13	July 1	4.75	Dec. 2	5.37
June 30	3.98						

Truro 1. Town of Provincetown. Lat  $42^{\circ}02'39''$ , long  $70^{\circ}06'20''$ . Driven unused water-table well in glacial drift, diam  $1\frac{1}{4}$  in, depth 68 ft. Lsd, 16 ft above msl (previously reported as about 25 ft). MP, top of casing, 3.50 ft above lsd. Highest water level 10.0 below lsd, Jan. 1, 8, 22, Oct. 8, 1955, Aug. 18, 1956; lowest 12.1 below lsd, Sept. 11, 1954. Records available: 1950-57. Water levels affected by pumping.

Feb. 18, 1956	10.5	Sept. 2, 1956	11.1	Mar. 30, 1957	10.8	Sept. 28, 1957	11.5
June 30	10.8	Dec. 29	10.7	June 29	11.1	Dec. 28	10.9
Aug. 18	10.0						

#### Berkshire County

Cheshire 2. John Jayko. Wells and Jenks Rds. Lat  $42^{\circ}35'03''$ , long  $73^{\circ}07'54''$ . Dug unused water-table well in glacial drift, depth 22 ft. Lsd, about 1,210 ft above msl. MP, inside rim of west side of concrete well top, 1.00 ft above lsd. Highest water level 0.09 below lsd, Jan. 19, 1952; lowest 13.46 below lsd, Oct. 26, 1953. Records available: 1951-57.

Mar. 26, 1956	5.66	Oct. 1, 1956	7.26	Apr. 1, 1957	2.66	Sept. 30, 1957	9.64
June 26	5.89	Dec. 31	1.18	July 1	6.32	Dec. 30	1.85

Great Barrington 1. Mrs. Dora A. Campbell. North Plains Rd. and Division St. Lat  $42^{\circ}13'38''$ , long  $73^{\circ}21'52''$ . Dug unused water-table well in glacial drift, diam 34 in, depth 24 ft (previously reported as 22 ft). Lsd, 732.11 ft above msl. MP, top of concrete masonry work, at lsd. Highest water level 15.51 below lsd, Aug. 1, 1945; lowest 24 below lsd, Sept. 26, Oct. 31, Nov. 28, 1957. Records available: 1936-57.

Mar. 29, 1956	20.82	Sept. 27, 1956	23.10	Mar. 28, 1957	21.99	Sept. 26, 1957	24.00
June 28	20.53	Oct. 25	23.35	June 27	22.52	Dec. 26	22.43
Aug. 30	23.35	Dec. 27	21.87				

e Estimated.

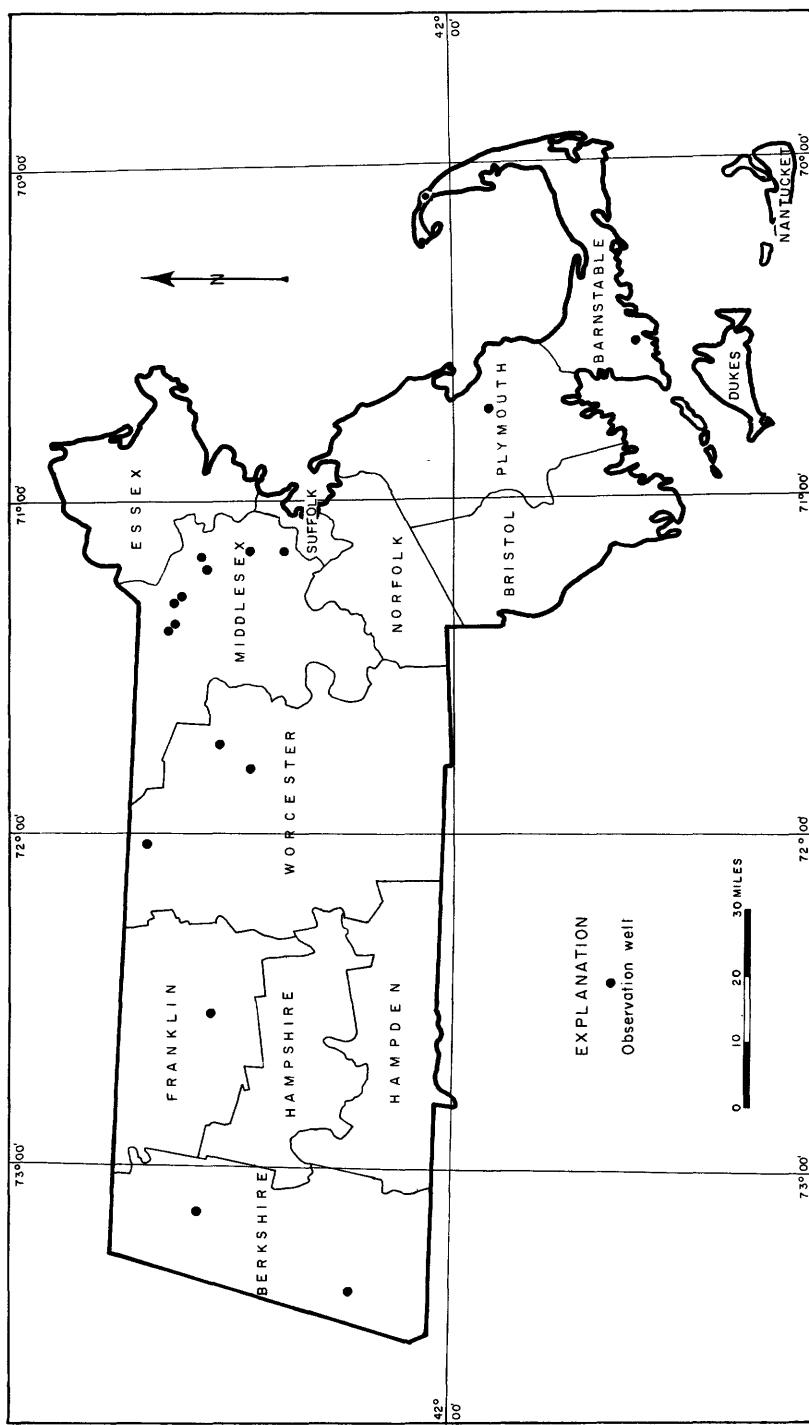


Figure 6. --Location of observation wells in Massachusetts, 1956-57.

Franklin County

Montague 5. C. A. Kurtyka. Lat  $42^{\circ}33'05''$ , long  $72^{\circ}32'03''$ . Dug unused water-table well in glacial drift, diam 38 in, depth 9 ft (previously reported as 7 ft). Lsd, about 240 ft above msl. MP, center of chiseled cross in stone of rock lining, 1.30 ft below lsd. Highest water level 0.78 below lsd, Apr. 27, 1944; dry July 15, 22, 29, 1957. Records available: 1936-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 26, 1956	1.73	Oct. 1, 1956	3.00	Apr. 1, 1957	3.40	Sept. 30, 1957	6.00
July 2	3.70	Dec. 31	2.75	July 1	4.70	Dec. 30	2.00

Middlesex County

Cambridge 667. Cambridge Water Dept. Blanchard Rd. and Concord Ave. Lat  $42^{\circ}23'16''$ , long  $71^{\circ}09'25''$ . Drilled unused water-table well in sand and gravel, diam 8 in, depth 129 ft. Lsd, 11.63 ft above msl. MP, top of casing, 0.39 ft above lsd. Highest water level 5.71 below lsd, May 18, 1945; lowest 23.82 below lsd, Dec. 29, 1950. Records available: 1944-57.

Mar. 27, 1956	6.60	Sept. 29, 1956	12.91	Mar. 30, 1957	9.63	Sept. 28, 1957	16.20
June 27	13.56	Dec. 29	16.78	July 1	8.73	Dec. 30	21.21

Chelmsford 68. Mrs. Harold Blackie. Middlesex St. and Groton Rd. Lat  $42^{\circ}38'45''$ , long  $71^{\circ}23'14''$ . Drilled unused water-table well in outwash, diam 6 in, depth 50 ft, cased to 50. Lsd, 100.83 ft above msl. MP, top of hole in cap on casing, 1.40 ft below lsd. Highest water level 5.38 below lsd, May 2, 1953; lowest 12.24 below lsd, Sept. 28, 1957. Records available: 1939-57.

Mar. 30, 1956	8.38	Sept. 29, 1956	9.51	Mar. 30, 1957	7.84	Sept. 28, 1957	12.24
June 27	8.26	Nov. 29	8.79	June 28	9.98	Dec. 27	8.00

Lowell 14. Rogers Hall School. Rogers St. and Fort Hill Ave. Lat  $42^{\circ}38'12''$ , long  $71^{\circ}17'48''$ . Dug unused water-table well in till, diam 24 in, depth 30 ft. Lsd, 157.78 ft above msl. MP, top edge of stone slab under wooden cover, 0.20 ft below lsd. Highest water level 8.38 below lsd, Mar. 30, 1956; lowest 22.46 below lsd, Nov. 7, 1939. Records available: 1939-57.

Mar. 30, 1956	8.38	Sept. 29, 1956	16.35	Mar. 30, 1957	10.78	Sept. 28, 1957	17.66
June 27	11.60	Dec. 29	14.42	June 28	13.05	Dec. 27	17.27

Lowell 41. (Cook test well 3.) City of Lowell. Plain and Manufacturers Sts. Lat  $42^{\circ}37'20''$ , long  $71^{\circ}19'12''$ . Driven unused water-table well in outwash, diam 2 in, depth 53 ft. Lsd, 105.63 ft above msl. MP, top of casing, at lsd. Highest water level 4.66 below lsd, Feb. 15, 1941; lowest 20.95 below lsd, Sept. 2, 1950. Records available: 1939-57. Water levels affected by pumping.

Mar. 27, 1956	9.37	Dec. 29, 1956	10.80	Mar. 30, 1957	9.87	Oct. 30, 1957	13.98
June 27	12.21	Jan. 28, 1957	9.91	June 28	12.32	Dec. 27	8.27
Sept. 29	12.90	Feb. 27	11.22				

Lowell 43. (Test well 26.) City of Lowell. Pawtucket Blvd. and Boulevard Ave. Lat  $42^{\circ}38'19''$ , long  $71^{\circ}22'02''$ . Driven unused water-table well in sand and gravel, diam  $2\frac{1}{2}$  in, depth 26 ft (previously reported as 32). Lsd, 101.06 ft above msl. MP, top of casing, at lsd. Highest water level 10.62 below lsd, June 4, 1940; lowest 25.76 below lsd, Dec. 30, 1948. Records available: 1940-57. Water levels affected by pumping.

Mar. 30, 1956	19.81	Dec. 29, 1956	21.46	Mar. 30, 1957	23.03	Sept. 28, 1957	23.91
June 27	19.05	Jan. 28, 1957	21.77	June 28	23.37	Dec. 27	21.02
Sept. 29	20.38						

Wilmington 10. L. Chisholm. Hopkins St. and Shawsheen Ave. Lat  $42^{\circ}33'29''$ , long  $71^{\circ}12'25''$ . Dug unused water-table well in sand, diam 36 in, depth 9 ft. Lsd, 113.63 ft above msl. MP, top of wooden cover, 0.45 ft above lsd. Highest water level 0.73 below lsd, Nov. 30, 1944; dry, Dec. 13, 1941, Oct. 30, 1957. Records available: 1940-57.

Mar. 27, 1956	1.05	Sept. 29, 1956	7.42	Mar. 30, 1957	1.42	Sept. 28, 1957	e9.00
June 27	3.80	Dec. 29	2.32	July 1	5.39	Dec. 30	1.52

e Estimated.

Wilmington 78. Town of Wilmington. Whitefield School, Middlesex Ave. Lat  $42^{\circ}34'01''$ , long  $71^{\circ}09'38''$ . Dug observation water-table well in sand, diam 42 in, depth 12 ft. Lsd, about 80 ft above msl. MP, hole in base of wooden recorder shelter (since Nov. 7, 1957), 0.33 ft above lsd. Highest water level 4.90 below lsd, May 2, 1953; lowest 11.27 below lsd, Oct. 30, 1957. Records available: 1951-57.

Wilmington 78--Continued.

Noon water level from recorder graph

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 27, 1956	h6.45	July 1, 1957	h9.16	Nov. 20, 1957	10.38	Dec. 15, 1957	9.28
June 27	h7.97	Sept. 28	h11.05	25	10.21	20	8.92
Sept. 29	h10.42	Oct. 30	h11.27	30	10.10	25	8.74
Dec. 29	h8.07	Nov. 10	10.72	Dec. 5	9.93	31	e8.4
Mar. 30, 1957	h7.33	15	10.54	10	9.75		

e Estimated.

h Tape measurement.

Woburn 38. City of Woburn. Woburn Parkway. Lat  $42^{\circ}27'57''$ , long  $71^{\circ}09'38''$ . Driven unused water-table well in glacial drift, diam  $2\frac{1}{2}$  in, depth 21 ft. Lsd, 51.66 ft above msl. MP, lowest point on top of bent casing, 1.50 ft above lsd. Highest water level 7.62 below lsd, Mar. 2, 1945; lowest 20.15 below lsd, Nov. 29, 1957. Records available: 1940-57.

Mar. 27, 1956	8.53	Sept. 29, 1956	16.16	Mar. 30, 1957	9.20	Sept. 28, 1957	18.19
June 27	10.96	Dec. 29	12.32	July 29	12.42	Dec. 30	16.93

Plymouth County

Plymouth 22. U. S. Geol. Survey. Plymouth Airport. Lat  $41^{\circ}54'53''$ , long  $70^{\circ}43'59''$ . Driven observation water-table well in outwash, diam  $1\frac{1}{4}$  in, depth 41 ft. Lsd, about 145 ft above msl. MP, top of casing, 1.20 ft above lsd. Highest water level 22.62 below lsd, Apr. 29, 1957; lowest 26.64 below lsd, Dec. 30, 1957. Records available: 1956-57.

Nov. 5, 1956	24.82	Mar. 4, 1957	23.76	July 9, 1957	23.78	Oct. 28, 1957	25.96
30	25.26	Apr. 3	23.74	Aug. 2	24.20	Dec. 3	26.44
Jan. 2, 1957	24.69	29	22.62	Oct. 2	25.48	30	26.64
Feb. 1	24.05	May 31	22.98				

Worcester County

Leominster 11. C. S. Pierce. Nashua St. and Boston & Maine RR. tracks. Lat  $42^{\circ}31'55''$ , long  $71^{\circ}44'06''$ . Dug unused water-table well in glacial drift, diam 4 ft, depth 11 ft. Lsd, 363.18 ft above msl. MP, top of horizontal steel bar, 1.30 ft above lsd. Highest water level 0.54 below lsd, Sept. 11, 1954; lowest 9.98 below lsd, Sept. 28, 1957. Records available: 1939-57.

Mar. 1, 1956	2.51	Oct. 30, 1956	8.74	Mar. 27, 1957	3.31	Sept. 28, 1957	9.98
June 30	5.56	Nov. 29	7.64	June 28	6.88	Nov. 29	6.94
Sept. 28	9.19						

Sterling 1. Nunzio Lanciani. Justice Hill and South Nelson Rds. Lat  $42^{\circ}28'05''$ , long  $71^{\circ}48'08''$ . Dug unused water-table well in till, diam 24 in, depth 15 ft. Lsd, about 710 ft above msl. MP, edge of notch in center of 2- x 4-in board, at lsd. Highest water level 2.01 below lsd, May 21, 1954; lowest 13.56 below lsd, Oct. 25, 1957. Records available: 1947-57.

Mar. 30, 1956	3.00	Sept. 28, 1956	12.25	Mar. 29, 1957	3.12	Sept. 27, 1957	12.89
June 29	5.37	Dec. 28	3.26	June 28	5.83	Dec. 27	2.95

Winchendon 13. W. B. Hart. Forristall and Crosby Rds. Lat  $42^{\circ}42'04''$ , long  $72^{\circ}01'52''$ . Dug unused water-table well in glacial drift, diam 24 in, depth 12 ft. Lsd, 1,209.36 ft above msl. MP, top of wooden cover (since July 17, 1956), 0.82 ft above lsd. Highest water level 1.86 below lsd, Mar. 20, 1948; lowest 12.99 below lsd, Nov. 27, 1956. Records available: 1939-57.

Mar. 30, 1956	5.33	Sept. 28, 1956	12.27	Apr. 29, 1957	4.36	Sept. 28, 1957	12.31
June 29	7.49	Dec. 30	5.73	June 29	7.27	Dec. 28	4.16

## MICHIGAN

By P. R. Giroux

The observation-well program was continued in 1956 and 1957 in cooperation with the State Water Resources Commission and the Geological Survey Division of the State Department of Conservation. Figure 7 shows the location of observation wells included in this report.

### Well-Numbering System

Wells in Michigan are numbered according to the rectangular subdivisions of the public lands, with reference to the Michigan meridian and base line. The first two segments of a well number designate the township and range; the third, the section and the serial number assigned to each well. Thus, well 30N 6E 6-1 is well 1 in sec. 6, T. 30 N., R. 6 E. The designation formerly used is included in each well description.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum unless otherwise indicated.

#### Alpena County

##### Green Township

30N 6E 6-1. Formerly ApGn 1. Robert E. James. NW $\frac{1}{4}$ NE $\frac{1}{4}$  of sec. Dug unused water-table well in deposits of Pleistocene age, diam 18 in, depth 19 ft, cribbed with rock to open bottom. MP, top of recorder base, 2.00 ft above lsd. Highest water level 0.90 below lsd, Apr. 13, 1952; lowest 9.52 below lsd, Dec. 11-15, 1949. Records available: 1948-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27, 1956	6.17	Oct. 31, 1956	6.95	Apr. 26, 1957	3.07	Oct. 9, 1957	7.04
Apr. 13	2.66	Jan. 8, 1957	6.22	July 16	3.49	Dec. 27	6.19
July 27	5.18						

#### Baraga County

##### Covington Township

48N 32W 12-1. Formerly BgCv 1. (W.M.P. No. 14.) State Highway Dept. U. S. Highway 41. Near Nestoria. SE $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Driven observation water-table well in sand and gravel, diam 1 $\frac{1}{4}$  in, depth 10 ft, screened 7-10. MP, top of casing, 0.90 ft above lsd. Highest water level 4.19 below lsd, May 3, 1951; lowest 6.72 below lsd, Mar. 15, 1949. Records available: 1948-57. Measurements by Wisconsin-Michigan Power Co.

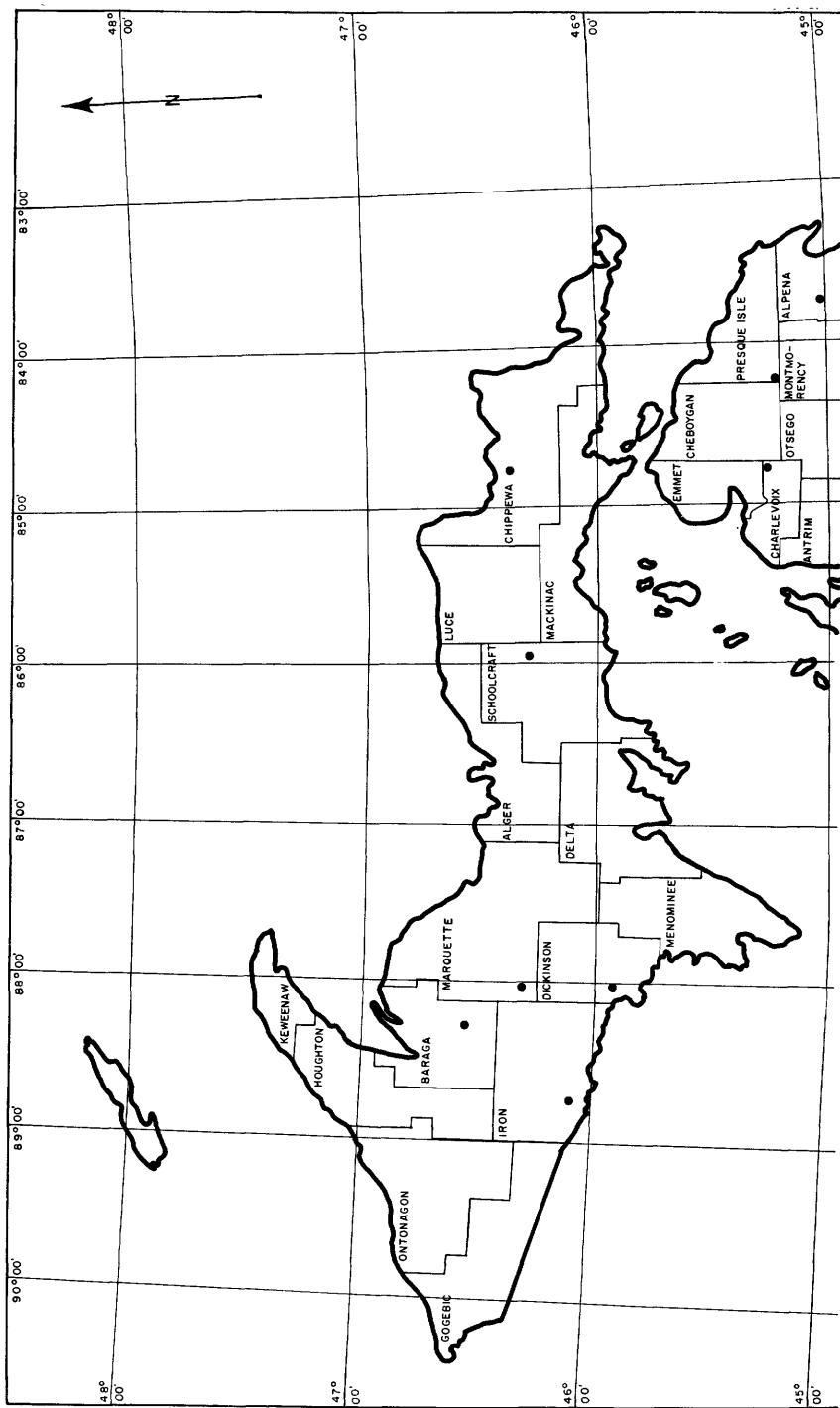
Jan. 30, 1956	5.64	Aug. 1, 1956	5.02	Jan. 31, 1957	5.33	Aug. 1, 1957	5.10
Feb. 28	5.92	Sept. 1	4.92	Feb. 28	5.51	30	5.02
Mar. 29	6.01	Oct. 1	4.87	Mar. 28	5.40	Sept. 30	4.83
Apr. 30	4.88	Nov. 1	4.91	May 1	4.84	Oct. 31	4.92
May 31	4.78	30	4.97	30	4.83	Dec. 2	5.00
July 3	4.75	Jan. 4, 1957	5.10	July 1	4.89		

#### Branch County

##### City of Coldwater

6S 6W 22-1. Formerly BrCW 3. City of Coldwater. Park Ave. and Bennett St., Coldwater. Drilled unused artesian well in sand and gravel of Pleistocene age, diam 8 to 6 in, depth 130 ft, screened 80-130. MP, top of 1-in casing extension, 10.00 ft below lsd. Highest water level 10.08 below lsd, Apr. 8, 1950; lowest 16.67 below lsd, Jan. 15, 1954. Records available: 1949-57. Measurements by Board of Public Works. Water levels affected by pumping.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES



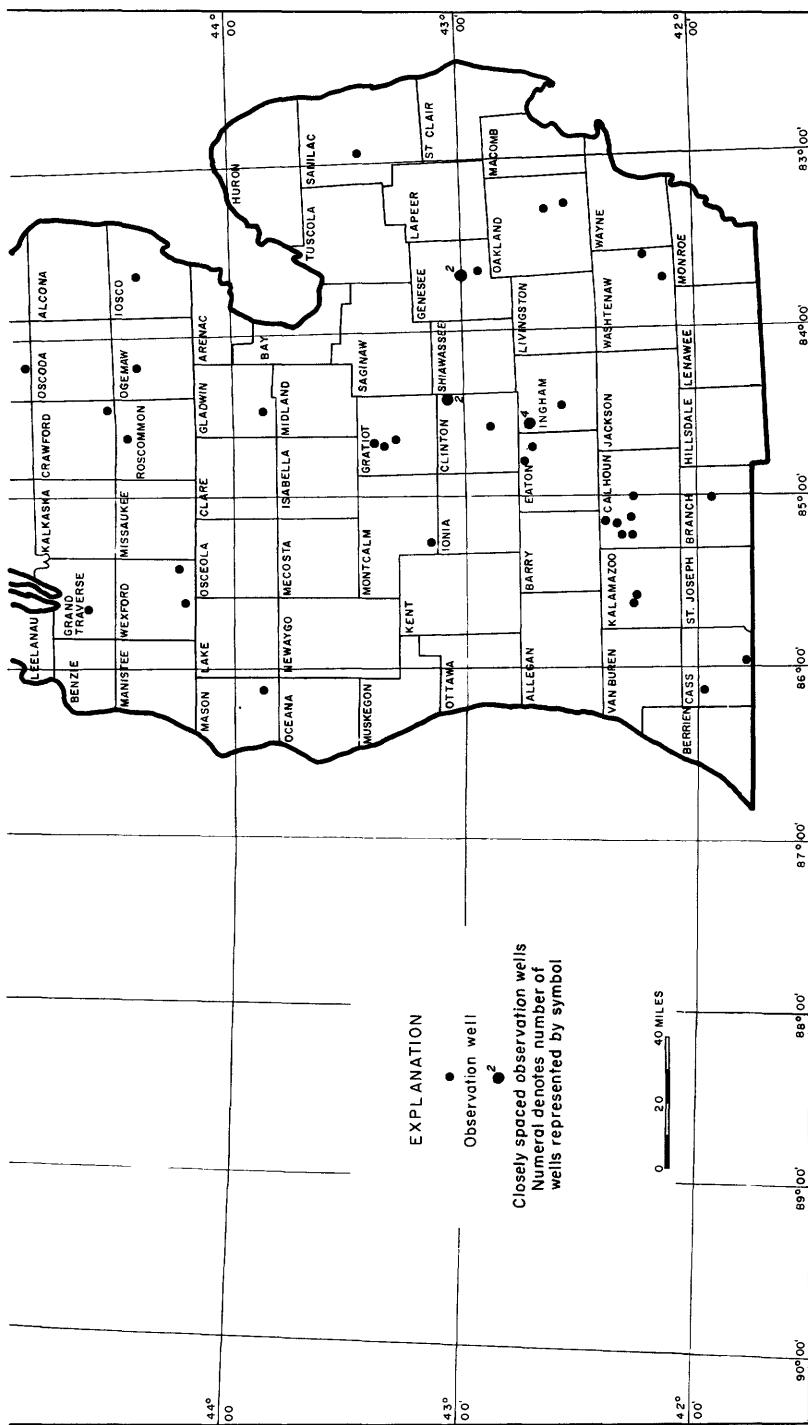


Figure 7. --Location of observation wells in Michigan, 1956-57.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

6S 6W 22-1--Continued.

	Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan.	2, 1956	15.09	June 29, 1956	13.09	Jan. 11, 1957	15.17	July 12, 1957	15.05
	7	14.18	July 6	14.07		18	19	15.40
	13	14.78		14		25	26	15.50
	20	14.64		21	Feb. 1	16.21	Aug. 1	16.00
	30	15.29	Aug. 4	14.16		8	16.64	15.93
Feb.	3	14.52		17	14.44	15	14.96	15.74
	10	15.62		24	13.60	22	14.87	15.85
	17	14.82	Sept. 1	14.75	Mar. 1	14.60	29	15.38
	24	15.06		5	14.60	8	15.96	15.34
Mar.	2	14.20		14	14.94	15	15.85	15.49
	9	13.15		21	13.97	22	14.48	21
	16	13.88		28	15.22	29	15.54	15.45
	23	13.64	Oct. 5	15.52	Apr. 5	15.59	Oct. 5	16.07
	30	13.28		12	15.35	12	13.90	15.84
Apr.	6	13.06		20	15.97	19	14.75	15.74
	13	12.99		26	15.90	26	14.55	15.44
	20	14.01	Nov. 2	15.83	May 3	14.30	Nov. 1	14.64
	27	13.68		9	15.92	10	14.80	14.56
May	4	12.73		16	15.82	16	14.79	15.05
	11	12.54		23	15.81	24	14.60	14.57
	18	12.24		30	15.95	31	14.78	14.53
	28	12.79	Dec. 8	15.99	June 7	14.55	Dec. 6	14.60
	31	12.93		14	15.66	13	13.78	14.50
June	8	13.37		21	16.48	20	15.03	13.58
	17	12.83		29	16.44	29	13.95	27
	22	13.60	Jan. 4, 1957	16.12	July 5	15.66		13.82

Calhoun County

## Pennfield Township

1S 7W 10-1. Formerly ChPf 102. Kenneth N. Sabin. NW $\frac{1}{4}$ NW $\frac{1}{4}$  of sec. Dug stock water-table well in deposits of Pleistocene age, diam 15 in, depth 8 ft. Lsd, 907.99 ft above msl. MP, top of wood pump base, 1.65 ft above lsd. Highest water level 0.88 below lsd, Mar. 28, 1950; lowest 5.90 below lsd, Jan. 27, 1954. Records available: 1946-57.

Jan.	4, 1956	5.23	July 11, 1956	3.84	Jan. 9, 1957	5.17	July 10, 1957	4.37
	11	4.64	18	3.94	16	5.31	17	4.37
	18	4.36	25	3.93	23	5.32	24	4.65
	25	4.42	Aug. 1	4.08	30	5.32	31	4.74
Feb.	1	4.43	8	4.17	Feb. 6	5.31	Aug. 7	4.80
	8	4.44	15	4.18	13	4.60	14	4.92
	15	5.20	22	4.24	20	4.59	21	4.94
	23	5.21	29	4.32	27	4.95	28	5.02
	29	4.37	Sept. 5	4.37	Mar. 6	4.94	Sept. 1	5.05
Mar.	7	4.34	12	4.46	13	5.04	11	5.22
	14	4.31	19	4.48	20	5.05	17	5.22
	21	4.59	26	4.48	28	4.92	18	5.24
	28	4.61	Oct. 3	4.49	Apr. 3	4.94	25	5.21
Apr.	4	4.20	10	4.71	10	4.61	Oct. 2	5.23
	11	4.34	17	4.73	17	4.63	9	5.29
	18	4.35	25	4.80	24	4.74	16	5.32
	25	4.70	31	4.82	May 1	4.27	23	5.33
May	2	3.91	Nov. 7	4.92	8	4.34	30	5.00
	9	4.09	14	4.93	15	4.37	Nov. 6	5.23
	16	4.11	21	4.93	22	4.02	13	5.18
	23	3.43	28	5.02	29	4.09	20	4.90
	29	3.51	Dec. 5	5.03	June 5	4.24	27	4.88
June	6	3.51	12	5.09	12	4.34	Dec. 4	5.11
	13	3.52	19	5.09	18	4.35	11	5.14
	20	3.52	26	5.15	26	4.37	18	5.15
	27	3.50	Jan. 3, 1957	5.16	July 3	4.50	26	4.84
July	6	3.49						

1S 7W 32-1. Formerly ChPf 1. City of Battle Creek. NE $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Drilled unused artesian well in Marshall formation, diam 8 in, depth 127 ft, cased to 103. Lsd, 830.79 ft above msl. MP, top of recorder base, 2.10 ft above lsd. Highest water level 0.7 below lsd, Apr. 26-27, 1950; lowest 13.04 below lsd, Aug. 13, 1957. Records available: 1939-57. Measurements by Water Dept. Water levels affected by pumping.

1S 7W 32-1--Continued.

## 2 a. m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	8.37	6.75	6.18	5.15	4.62	7.84	6.03	7.53	7.83	7.50	5.80
10	7.56	....	5.10	5.20	6.30	6.70	7.65	8.63	7.80	6.12	7.70	6.30
15	6.85	7.25	5.85	5.25	4.85	8.34	7.31	6.16	6.47	8.09	7.60	6.20
20	7.50	7.00	6.65	6.25	4.62	7.63	6.57	8.65	7.97	7.18	6.50	6.42
25	8.50	6.85	5.90	6.43	5.80	6.63	7.20	6.85	8.30	8.07	6.90	6.02
Eom	....	6.20	6.00	5.38	6.35	5.63	7.50	10.20	6.75	7.32	6.75	7.11
												1957
5	7.13	7.36	7.80	7.35	9.10	8.97	9.65	12.50	11.65	11.04	10.98	10.81
10	8.32	7.85	8.50	7.70	8.80	9.75	8.46	10.00	10.40	10.85	10.81	10.00
15	8.27	7.85	8.85	6.70	6.39	7.45	10.60	10.99	11.25	10.40	10.20	10.00
20	7.55	6.68	7.90	7.55	8.35	8.88	11.10	11.65	11.25	11.50	10.49	10.30
25	6.80	8.10	8.20	6.85	8.25	9.10	10.67	11.60	10.93	9.75	10.53	9.25
Eom	6.76	7.30	7.40	7.20	9.90	9.50	12.35	10.67	11.43	10.58	10.65	10.20

## City of Battle Creek

2S 8W 2-1. Formerly ChBC 160. Post Products Corp. Angell and Lafayette Sts. Drilled unused artesian well in Marshall formation, diam 10 in, depth 92 ft, cased to 45. Lsd, 818.99 ft above msl. MP, top of recorder base, 1.00 ft above lsd. Highest water level 4.75 below lsd, Apr. 9, 1947; lowest 9.60 below lsd, Oct. 15-16, 1957. Records available: 1946-57. Measurements by city of Battle Creek. Water levels affected by pumping.

## 2 a. m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	8.59	8.84	....	7.48	6.31	7.12	8.07	8.23	8.48	8.85	8.82	....
10	8.65	8.92	....	7.41	6.31	7.35	8.00	8.39	8.38	8.86	9.01	....
15	8.70	8.87	....	7.45	6.01	7.82	7.97	h8.48	8.67	8.70	8.99	8.97
20	8.81	8.65	....	7.76	6.20	h7.97	8.17	8.28	8.66	8.91	8.95	8.98
25	8.86	8.71	7.75	7.87	6.64	7.79	8.14	8.48	8.68	8.90	....	8.67
Eom	8.89	h7.93	7.62	6.40	6.85	8.06	8.26	8.55	8.72	8.90	....	8.60
												1957
5	....	....	8.56	8.41	7.60	8.06	8.49	8.76	9.04	....	8.80	8.30
10	8.93	8.40	8.61	7.94	7.95	8.16	8.01	9.00	9.04	h9.52	8.71	8.24
15	8.96	8.43	8.48	7.90	8.08	8.39	8.15	9.12	9.04	9.41	8.20	8.38
20	8.94	8.53	e8.30	8.15	7.58	8.44	8.60	9.15	....	9.34	7.96	8.22
25	....	8.46	8.20	8.19	7.60	8.45	8.51	9.14	9.30	8.86	7.98	7.64
Eom	....	8.58	8.37	7.50	7.82	8.41	8.73	9.07	9.21	8.78	8.08	7.71

e Estimated.

h Tape measurement.

## Battle Creek Township

2S 8W 14-2. Formerly ChBc 137. City of Battle Creek. SE $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Drilled unused artesian well in sand of Pleistocene age, diam 26 in, depth 89 ft, screened 49-89. Lsd, 914.97 ft above msl. MP, ledge support of manhole cover, 0.56 ft above lsd. Highest water level 6.22 below lsd, May 29, 1950; lowest 12.86 below lsd, Oct. 18, 1946. Records available: 1945-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 24, 1956	7.68	Oct. 3, 1956	8.83	Apr. 18, 1957	9.24	Oct. 17, 1957	9.61
July 16	7.61	Dec. 19	9.63	Aug. 14	8.85	Dec. 26	9.12

## Emmett Township

2S 7W 10-1. Formerly ChEm 10. Fred Frey. Formerly C. W. Cronkhite. 1302 East Michigan Ave. NW $\frac{1}{4}$ SW $\frac{1}{4}$  of sec. Drilled unused artesian well in Marshall formation, diam 6 in, depth 84 ft. Lsd, 884.94 ft above msl. MP, top of 6-in ell, 4.80 ft below lsd. Highest water level 11.42 below lsd, May 29, 1950; lowest 15.67 below lsd, Apr. 18, 1957. Records available: 1946-53, 1956-57. Water levels affected by pumping.

Apr. 24, 1956	15.17	Oct. 3, 1956	14.95	Apr. 18, 1957	15.67	Oct. 17, 1957	15.60
July 16	14.00	Dec. 19	15.48	Aug. 15	15.08	Dec. 26	15.39

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

## City of Marshall

2S 6W 25-1. Formerly ChMA 2. City of Marshall. East Michigan Ave. and East Dr. Drilled unused artesian well in Marshall formation, diam 6 in, depth 59 ft. Lsd, about 904.85 ft above msl. MP, lower outside edge of hydrant spout, 1.20 ft above lsd. Highest water level 5.46 below lsd, May 9, 1950; lowest 9.43 below lsd, Oct. 17, 1957. Records available: 1950-57. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 24, 1956	8.97	Oct. 3, 1956	9.08	Apr. 18, 1957	9.19	Oct. 17, 1957	9.43
July 16	8.65	Dec. 19	9.26	Aug. 14	9.32	Dec. 26	8.95

Cass County

## City of Dowagiac

6S 16W 1-1. Formerly CsDW 1. City of Dowagiac. Chestnut St. and Pennsylvania Ave., Dowagiac. Drilled unused artesian well in sand and gravel of Pleistocene age, diam 10 in, depth 159 ft, screened to 147. Lsd, 750.19 ft above msl. MP, top of 1-in pipe extension, 5.20 ft above lsd. Highest water level 4.20 above lsd, Nov. 30, 1951; lowest 5.97 below lsd, July 24, 1953. Records available: 1949-57. Measurements by the Board of Public Works. Water levels affected by pumping.

Jan. 6, 1956	+1.57	June 29, 1956	0.55	Dec. 28, 1956	+0.78	June 28, 1957	+3.20
13	.20	July 6	.53	Jan. 4, 1957	.78	July 5	.03
20	.62	13	.97	11	.75	12	1.55
27	+1.45	20	+2.53	18	.61	19	2.72
Feb. 3	.20	27	+2.45	25	.78	26	1.72
10	+2.78	Aug. 3	+2.45	Feb. 1	.55	Aug. 2	1.05
17	+2.62	10	.72	8	+1.26	9	2.47
24	.45	17	.80	15	.36	16	+1.45
Mar. 2	+3.03	24	+2.27	22	+1.36	23	1.30
9	+3.03	31	+2.28	Mar. 1	.86	30	1.30
16	+3.61	Sept. 7	+3.53	8	+1.45	Sept. 13	.55
23	+2.78	14	2.72	15	.28	20	.22
30	+1.45	21	+1.53	22	+3.45	27	.86
Apr. 6	+3.36	28	+2.95	29	.20	Oct. 4	.36
13	+1.53	Oct. 6	.64	Apr. 5	+2.20	18	.25
20	+2.20	12	+1.61	12	+3.36	25	.30
27	+2.12	26	.99	19	+2.28	Nov. 1	+1.20
May 4	.86	Nov. 2	+2.37	26	.38	8	1.47
11	.61	9	+1.26	May 3	+3.70	15	.86
18	+2.03	16	.05	10	+1.95	29	+1.62
25	+2.03	23	.37	17	+3.95	Dec. 6	+1.46
June 1	+2.20	30	+2.53	31	.13	13	+1.20
8	1.30	Dec. 7	.30	June 8	+1.54	20	.39
15	2.38	14	.47	14	+2.20	27	.70
22	+1.36	21	.75	21	2.80		

## Mason Township

8S 14W 17-1. Formerly CsMa 1. Ted Little. NE<sub>4</sub><sup>1</sup>NW<sub>4</sub><sup>1</sup> of sec. Dug unused water-table well in deposits of Pleistocene age, diam 28 in, depth 55 ft, cribbed with brick to open bottom. MP, top of wooden cover (since Sept. 22, 1957), 0.80 ft above lsd. Highest water level 46.20 below lsd, July 16, 1950; lowest 55.03 below lsd, Mar. 10, 1947. Records available: 1945-57.

Jan. 1, 1956	50.20	Apr. 29, 1956	50.16	Aug. 26, 1956	49.71	Dec. 23, 1956	50.69
8	50.20	May 6	50.11	Sept. 2	49.74	30	50.78
15	50.23	13	49.99	9	49.83	Jan. 6, 1957	50.85
22	50.38	20	49.94	16	48.87	13	50.98
29	50.45	27	49.89	23	49.94	20	51.02
Feb. 5	50.56	June 3	49.80	30	50.00	27	51.13
12	50.58	10	49.68	Oct. 7	50.04	Feb. 3	51.12
19	50.59	17	49.64	14	50.06	10	51.40
26	50.60	25	49.61	21	50.14	17	51.40
Mar. 4	50.61	July 1	49.61	28	50.16	24	51.37
11	50.37	8	49.53	Nov. 4	50.26	Mar. 3	51.46
18	50.36	15	49.44	11	50.26	10	51.48
25	50.06	22	49.53	18	50.27	17	51.60
Apr. 1	50.23	29	49.57	25	50.36	24	51.69
8	50.16	Aug. 5	49.51	Dec. 2	50.49	31	51.76
15	50.10	12	49.59	9	50.66	Apr. 7	51.82
22	50.15	19	49.70	16	50.68	14	51.85

## 8S 14W 17-1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 21, 1957	51. 92	June 30, 1957	51. 88	Sept. 1, 1957	52. 02	Nov. 3, 1957	52. 34
28	51. 98	July 7	51. 88	8	52. 08	10	52. 45
May 5	51. 98	14	51. 89	15	52. 07	19	52. 45
12	51. 94	21	51. 86	22	52. 14	24	52. 40
19	51. 92	28	51. 91	29	52. 15	Dec. 1	52. 43
26	51. 92	Aug. 4	51. 95	Oct. 6	52. 16	8	52. 55
June 2	51. 89	11	51. 99	13	52. 17	15	52. 56
9	51. 85	18	52. 01	20	52. 28	22	52. 59
16	51. 83	25	52. 03	27	52. 26	29	52. 57
23	51. 85						

Charlevoix County

## Chandler Township

33N 4W 2-1. Formerly CvCh 1. State Dept. of Conservation. SW<sub>1</sub>NE<sub>4</sub> of sec. Drilled unused artesian well in deposits of Pleistocene (?) age, diam 6 in, depth 94 ft. MP, metal strip in concrete block (since Aug. 31, 1956), 1.50 ft above lsd. Highest water level 70.85 below lsd, July 19, 1952; lowest 75.85 below lsd, Apr. 16, 1956. Records available: 1948-57.

Jan. 10, 1956	74. 59	Oct. 24, 1956	74. 40	Apr. 25, 1957	75. 02	Oct. 8, 1957	73. 09
Apr. 16	75. 85	Jan. 9, 1957	74. 75	July 16	74. 02	Dec. 27	73. 22
Aug. 21	74. 53						

Chippewa County

## Superior Township

46N 4W 24-1. Formerly CpSp 59. U. S. Forest Service. NE<sub>4</sub>SE<sub>1</sub> of sec. Drilled unused artesian well in deposits of Pleistocene age, diam 6 in, depth 54 ft. Lsd, about 850 ft above msl. MP, top of casing, 0.31 ft above lsd. Highest water level 22.45 below lsd, July 25, 31, 1957. lowest 27.77 below lsd, Apr. 12-13, 1956. Records available: 1952-57. For additional measurements see Vanlier and Deutsch (1958), Giroux (1958).

2 a. m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	26. 50	26. 93	27. 33	27. 71	26. 72	25. 48	25. 04	h24. 14	24. 01	24. 35	24. 70	24. 91
10	26. 57	26. 99	27. 39	27. 76	h26. 36	25. 36	24. 96	24. 02	24. 06	24. 31	24. 76	24. 88
15	26. 62	27. 06	27. 45	27. 74	26. 12	25. 26	24. 85	23. 95	24. 13	24. 45	24. 82	24. 95
20	26. 69	27. 13	h27. 51	27. 56	25. 93	25. 17	24. 71	23. 92	24. 20	24. 50	24. 86	24. 94
25	26. 76	27. 19	27. 56	27. 32	25. 77	25. 11	24. 51	23. 93	24. 27	24. 58	24. 90	24. 98
Eom	26. 86	27. 25	27. 64	27. 07	25. 60	h25. 07	24. 30	23. 93	24. 29	24. 63	24. 91	25. 03

1957

5	25. 12	25. 43	e25. 73	e26. 05	e24. 4	e22. 9	e22. 75	e22. 55	e23. 10	e23. 70	e24. 25	e24. 14
10	25. 17	25. 48	e25. 79	e26. 00	e23. 6	e22. 85	e22. 65	e22. 60	e23. 20	e23. 80	e24. 34	e24. 09
15	25. 22	25. 54	e25. 85	h25. 91	h23. 41	h22. 83	e22. 55	h22. 72	e23. 30	e23. 88	e24. 42	e24. 22
20	25. 25	25. 59	25. 92	e25. 7	e23. 3	e22. 8	e22. 50	e22. 85	e23. 43	e23. 97	e24. 41	e24. 23
25	25. 31	25. 64	e26. 04	e25. 3	e23. 1	e22. 8	e22. 45	e22. 90	e23. 52	e24. 06	e24. 27	e24. 25
Eom	25. 37	e25. 68	.....	e24. 9	e23. 0	e22. 8	e22. 45	e23. 00	e23. 60	e24. 17	e24. 17	e24. 26

e Estimated.

h Tape measurement.

Clinton County

## Village of Elsie

8N 1W 13-1. Formerly Ctes 1. Village of Elsie. SW<sub>1</sub>NW<sub>4</sub> of sec. Drilled unused artesian well in Saginaw formation, diam 12 in, depth 298 ft. Lsd, 699.68 ft above msl. MP, top of recorder base, 4.20 ft above lsd. Highest water level 3.78 above lsd, June 3, 1950; lowest 37.55 below lsd, Oct. 15, 1957. Records available: 1947-57. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 13, 1956	26. 60	Sept. 27, 1956	33. 62	Apr. 29, 1957	22. 85	Oct. 15, 1957	37. 55
July 13	28. 49	Dec. 12	28. 85	Aug. 13	32. 65	Dec. 30	22. 93

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

8N 1W 13-3. Formerly CtES 3. Village of Elsie. SW $\frac{1}{4}$ NW $\frac{1}{4}$  of sec. Drilled unused artesian well in gravel of Pleistocene age, diam 12 in, depth 45 ft. Lsd, 706.17 ft above msl. MP, top of recorder base, 2.20 ft above lsd. Highest water level 8.3 below lsd, Apr. 5, 1950; lowest 26.4 below lsd, Oct. 11, 1949. Records available: 1947-57. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 13, 1956	19.03	Sept. 27, 1956	12.52	Apr. 29, 1957	19.14	Oct. 15, 1957	12.55
July 13	11.95	Dec. 12	14.44	Aug. 13	15.61	Dec. 30	19.45

## Olive Township

6N 2W 16-1. Formerly CtOe 1. State Highway Dept. SE $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Drilled unused water-table well in gravel of Pleistocene age, diam 14 in, depth 23 ft, open bottom. Lsd, 803.32 ft above msl. MP, top of recorder base, 1.30 ft above lsd. Highest water level 14.59 below lsd, Apr. 19, 1952; lowest 18.53 below lsd, Dec. 29, 1953. Records available: 1948-57.

Jan. 31, 1956	18.11	Aug. 1, 1956	16.85	Jan. 30, 1957	18.26	July 29, 1957	16.02
Feb. 28	18.13	28	17.02	Feb. 28	18.10	Aug. 29	16.63
Mar. 27	17.97	Sept. 26	17.41	Mar. 29	17.93	Sept. 26	17.04
Apr. 10	17.70	Oct. 31	17.65	Apr. 29	17.37	Oct. 30	17.08
30	17.46	Nov. 30	17.86	May 29	16.10	Nov. 29	16.86
May 28	16.13	Dec. 28	18.00	June 27	16.44	Dec. 30	16.55
June 28	16.41						

## Crawford County

## South Branch Township

25N 1W 15-1. Formerly CrSb 1. State Dept. of Conservation. Huron National Forest. SE $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Drilled unused artesian well in deposits of Pleistocene age, diam 6 in, depth 56 ft. MP, top of recorder base, 1.54 ft above lsd. Highest water level 29.44 below lsd, Aug. 4, 1953; lowest 35.97 below lsd, Apr. 4-6, 1951. Records available: 1948-57.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	32.47	32.81	33.18	33.53	32.92	32.45	32.37	32.33	32.20	32.19	32.45	32.72
10	32.52	32.89	33.27	33.55	32.80	32.41	32.35	32.33	32.16	32.24	32.48	32.71
15	32.58	32.96	33.33	33.40	32.73	32.39	32.38	32.31	32.16	32.23	32.50	32.80
20	32.63	33.02	33.38	33.35	32.65	32.36	32.39	32.30	32.13	32.28	32.57	32.85
25	32.72	32.99	33.43	33.20	32.58	32.36	32.37	32.27	e32.14	32.35	32.56	32.89
Eom	32.80	33.14	33.49	33.05	32.47	32.36	32.39	32.20	32.13	32.35	32.65	32.87

1957

5	33.01	33.34	33.62	33.82	34.06	33.81	32.78	e32.02	31.52	31.71	32.02	32.35
10	33.05	33.35	33.67	33.90	34.07	33.60	32.70	e31.89	31.48	31.77	32.07	32.32
15	33.11	33.44	33.67	33.95	34.03	33.42	32.59	e31.76	31.45	31.81	32.13	32.46
20	33.16	33.50	33.72	33.96	34.06	33.24	32.45	e31.66	31.50	31.88	32.20	32.47
25	33.21	33.52	33.78	34.00	34.05	33.07	32.32	31.58	31.56	31.92	32.26	32.56
Eom	33.25	33.58	33.83	34.04	33.97	32.91	e32.16	31.53	31.61	e31.97	32.27	32.61

e Estimated.

h Tape measurement.

## Dickinson County

## Breitung Township

41N 30W 25-3. Formerly DkBg 3. (W.M.P. No. 3.) Oscar Martinson. Merriman. SE $\frac{1}{4}$ NE $\frac{1}{4}$  of sec. Dug domestic and stock water-table well in glacial till, size 4 by 4 ft, depth 13 ft, lined with concrete. MP, top of concrete curb, at lsd. Highest water level 1.73 below lsd, July 6, 1953; dry, November 1948-April 1949, Feb. 28, Mar. 29, 1956. Records available: 1945-56, 1948-57. Measurements by Wisconsin-Michigan Power Co.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30, 1956	12.00	Aug. 1, 1956	6.02	Jan. 31, 1957	9.28	Aug. 1, 1957	7.82
Feb. 28	(f)	Sept. 1	5.22	Feb. 28	9.89	30	8.65
Mar. 29	(f)	Oct. 1	6.30	Mar. 28	7.15	Sept. 30	8.34
Apr. 30	7.16	Nov. 1	7.97	May 1	3.75	Oct. 31	9.42
May 31	7.48	30	8.14	30	4.02	Dec. 2	7.57
July 3	4.91	Jan. 4, 1957	8.57	July 1	6.90		

f Dry.

Eaton County

## City of Grand Ledge

4N 4W 2-1. Formerly EaGL 1. Layne-Northern Co., Inc. Perry and Jefferson Sts., Grand Ledge. Drilled unused artesian well in Saginaw formation, diam 12 in, depth 376 ft, cased to 22. Lsd, 846.59 ft above msl. MP, top of recorder base, 1.00 ft above lsd. Highest water level 21.34 below lsd, May 5, 14, 1950; lowest 28.79 below lsd, Dec. 3, 1949. Records available: 1948-57. Measurements by city of Grand Ledge Water Dept. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	26.93	July 2, 1956	22.65	Dec. 24, 1956	26.75	June 24, 1957	24.12
9	27.07	9	22.51	31	26.70	July 1	24.13
17	27.15	16	22.81	Jan. 7, 1957	26.83	8	24.02
23	27.19	23	23.02	14	27.12	15	23.79
30	27.17	30	23.22	21	27.13	23	23.71
Feb. 6	27.16	Aug. 6	23.13	28	27.17	29	23.38
13	27.28	13	23.28	Feb. 3	27.42	Aug. 7	24.03
21	27.31	20	23.90	11	27.53	12	24.31
27	27.25	27	23.68	25	27.72	26	24.74
Mar. 5	27.20	Sept. 4	24.46	Mar. 4	27.73	Sept. 3	24.45
12	26.83	10	24.40	11	27.60	23	25.23
19	26.76	17	24.11	18	27.78	30	25.35
26	26.59	24	25.06	25	27.57	Oct. 7	25.43
Apr. 2	26.34	Oct. 1	25.39	Apr. 1	27.49	14	25.78
9	26.31	8	25.41	8	27.69	21	25.91
16	26.10	15	25.78	15	27.70	29	25.53
23	26.08	22	25.70	22	27.77	Nov. 5	25.78
30	26.04	29	25.94	29	27.35	12	25.98
May 7	25.76	Nov. 5	26.18	May 6	27.13	18	25.56
14	24.25	12	26.03	13	26.65	25	25.71
21	22.85	19	26.37	21	26.10	Dec. 2	25.79
28	22.39	26	26.41	27	24.60	9	26.04
June 4	22.07	Dec. 3	26.53	June 3	24.47	18	26.11
11	22.16	10	26.67	10	24.08	23	26.04
18	22.33	15	26.78	17	24.16	30	26.17
25	22.51						

## Delta Township

4N 3W 9-1. Formerly EaDt 215. Bernard B. Bosworth. SW $\frac{1}{4}$ SW $\frac{1}{4}$  of sec. Dug unused water-table well in deposits of Pleistocene age, diam 4 ft, depth 18 ft, cribbed with brick to open bottom. Lsd, 851.71 ft above msl. MP, top east side of concrete curb, at lsd. Highest water level 5.55 below lsd, Apr. 26, 1952; dry, Feb. 23, 1954. Records available: 1944-57. Apr. 10, 1956, 14.65; July 11, 10.60; Sept. 24, 12.53; Dec. 21, 15.12; Apr. 22, 1957, 12.72. Measurement discontinued.

Genesee County

## City of Flint

7N 7E 17-1. Formerly GeFL 491. Consumers Power Co. Franklin and Sunnyside Aves., Flint. Drilled unused artesian well in Saginaw formation, diam 12 in, depth 222 ft. Lsd, 757.58 ft above msl. MP, top of recorder base, 1.30 ft above lsd. Highest water level 24.23 below lsd, Feb. 12, 1950; lowest 37.99 below lsd, Aug. 24, 1955. Records available: 1946-57. Water levels affected by pumping.

2 a. m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	29.19	28.12	28.26	28.09	30.44	33.67	33.77	32.74	h30.06	29.21	28.36
10	.....	28.33	28.55	28.12	31.34	33.31	34.12	32.25	29.99	29.00	28.43	
15	29.58	.....	28.28	28.46	.....	32.72	33.23	34.21	31.67	29.74	28.76	28.58
20	29.41	28.88	28.29	28.61	30.06	33.01	33.20	34.41	30.88	29.73	28.55	28.56
25	.....	27.75	28.34	28.56	30.45	33.48	33.41	33.94	30.38	29.56	28.10	28.44
Em	29.37	28.55	28.25	.....	30.45	33.50	33.92	32.90	.....	29.07	28.20	.....

h Tape measurement.

7N 7E 17-1--Continued.

Day	1957											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	e28.20	27.71	27.36	26.82	27.53	27.91	30.45	31.12	30.42	e30.05	29.14	28.06
10	28.14	27.27	27.36	26.86	27.70	28.14	e30.35	e31.40	29.72	e29.80	29.23	27.78
15	28.28	27.41	27.23	27.62	27.35	e28.69	h30.71	31.48	29.56	e29.60	28.59	27.93
20	28.17	27.50	27.19	27.50	27.08	.....	30.65	e31.60	29.65	29.86	28.52	27.54
25	28.06	27.32	27.18	27.40	27.38	30.08	e30.76	e31.45	e29.50	h29.87	28.59	27.85
Eom	27.68	27.34	27.19	27.47	27.80	e30.05	30.85	30.71	e29.86	29.44	28.18	27.67

e Estimated.

h Tape measurement.

7N 7E 20-2. Formerly GeFL 354. City of Flint. Atherton Rd. and Day St., Flint.

Drilled unused artesian well in deposits of Pleistocene age, diam 2 in, depth 169 ft. Lsd, 751.43 ft above msl. MP, top of casing, 1.30 ft above lsd. Highest water level 1.09 below lsd, Apr. 26, 1950; lowest 9.07 below lsd, Sept. 15, 1955. Records available: 1947-57. Apr. 13, 1956, 6.04; July 6, 8.20; Sept. 27, 6.50; Dec. 12, 5.44; Apr. 25, 1957, 5.10; July 20, 6.63.

## Grand Blanc Township

6N 7E 9-1. Formerly GeGb 25. Grand Blanc Tank Plant, Fisher Body Div., General Motors Corp. SW<sub>1</sub>SE<sub>4</sub> of sec. Drilled unused artesian well in Saginaw formation, diam 6 in, depth 375 ft, cased to about 150. Lsd, 841.71 ft above msl. MP, top of recorder base, 3.00 ft above lsd. Highest water level 37.79 below lsd, Nov. 24, 1952; lowest 52.9 below lsd, Aug. 3, 1955. Records available: 1952-57. Measurements by Plant Water Dept. personnel. Water levels affected by pumping:

Day	2 a. m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	44.2	44.4	43.9	45.4	....	43.2	45.4	47.1	44.9	45.0	45.7	45.3
10	43.6	46.8	45.0	45.1	43.8	43.7	45.3	....	44.3	44.8	45.8	44.9
15	43.8	45.0	45.6	45.0	45.5	47.6	45.2	45.3	45.1	45.1	45.6	45.2
20	44.4	44.4	45.6	45.9	44.2	45.9	45.2	45.2	44.6	45.9	46.0	45.8
25	44.4	44.5	45.5	45.6	44.8	46.2	47.0	44.8	46.3	46.3	44.9	43.1
Eom	44.1	45.2	45.6	....	43.2	46.0	46.7	45.0	44.9	45.5	45.4	43.0

Day	1957											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	44.8	44.5	45.6	44.7	44.4	43.9	44.7	47.1	48.0	46.8	45.7	46.1
10	44.9	44.8	44.9	44.9	45.3	43.7	45.5	48.9	46.7	47.5	46.9	45.4
15	44.2	45.5	45.6	44.0	44.3	45.8	44.0	49.3	46.0	45.4	46.1	44.9
20	44.3	45.4	45.4	45.0	43.2	45.9	45.3	49.6	49.7	45.3	45.2	45.2
25	45.4	43.9	44.7	45.0	44.4	45.0	46.0	49.7	47.2	46.2	45.1	44.3
Eom	45.0	44.8	44.7	44.0	43.3	44.4	46.0	48.6	46.7	45.9	45.8	44.0

Gladwin County

## City of Beaverton

17N 1W 7-1. Formerly GwBV 1. City of Beaverton. 3d and Main Sts., Beaverton. Drilled unused artesian well in deposits of Pleistocene age, diam 12 in, depth 93 ft. Lsd, 721.50 ft above msl. MP, top of 2-in coupling, 1.00 ft above lsd. Highest water level 28.90 below lsd, May 14, 1956; lowest 49.35 below lsd, June 26, 1950. Records available: 1950-57. Measurements by city of Beaverton. Water levels affected by pumping.

Day	Tape measurements, 1956											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	32.53	.....	33.54	32.26	30.27	b39.42	32.37	.....	32.37	b38.87	b34.36	32.36
10	32.79	.....	32.74	30.35	b41.95	.....	32.26	b35.84	32.24	32.53	33.56	32.43
15	.....	32.81	32.28	.....	31.07	b46.95	.....	b45.09	31.62	b45.39	b45.57	32.38
20	32.68	32.38	b43.58	b43.55	.....	32.27	b40.79	32.42	b43.77	b45.34	b44.67	32.49
25	32.79	32.83	31.84	31.90	31.66	b44.57	33.57	32.44	32.47	.....	.....	32.57
Eom	32.62	33.09	b40.43	29.78	b45.86	31.60	b32.94	b38.30	.....	31.71	b40.62	31.83

Day	1957											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	32.61	32.57	32.32	32.46	.....	43.95	40.18	44.73	32.81	32.92	32.86	32.61
10	32.76	.....	32.55	.....	32.68	39.20	44.85	33.06	.....	.....	43.99	.....
15	40.43	33.62	35.56	32.14	46.24	37.57	33.28	41.71	.....	.....	32.94	.....
20	.....	32.55	32.09	32.58	31.84	32.07	41.95	42.82	42.07	.....	42.07	32.73
25	32.37	32.37	31.97	43.83	31.96	33.17	32.91	.....	43.77	43.68	43.91	.....
Eom	33.67	43.16	.....	44.20	32.12	.....	41.71	44.07	43.52	32.90	43.22	42.19

b Pumped recently.

Grand Traverse County

## Blair Township

26N 11W 27-1. Formerly GvBr 2. State Dept. of Conservation. NW $\frac{1}{4}$ SW $\frac{1}{4}$  of sec. Jetted observation water-table well in deposits of Pleistocene age, diam 2 in, depth 15 ft, open bottom. Lsd, 914.25 ft above msl. MP, top of pipe, 0.40 ft above lsd. Highest water level 1.32 below lsd, Oct. 30, 1951; lowest 4.02 below lsd, Aug. 18, 1936. Records available: 1935-37, 1941-44, 1948-57.

Date	Water level						
Apr. 17, 1956	1.58	Oct. 30, 1956	3.11	Apr. 30, 1957	2.35	Oct. 25, 1957	3.40
Aug. 22	2.48	Jan. 10, 1957	2.76	July 17	2.49	Dec. 30	2.65

Gratiot County

## City of Alma

12N 3W 35-5. Formerly GrAL 360. Reed Excavating Co. Bridge Ave. and Washington St., Alma. Dug unused water-table well in deposits of Pleistocene age, diam 36 in, depth 20 ft, open bottom. Lsd, 738.78 ft above msl. MP, top of wooden pump base, 0.20 ft above lsd. Highest water level 13.74 below lsd, Apr. 7, 1950; lowest 17.91 below lsd, Nov. 12, 1953. Records available: 1950-57.

Apr. 18, 1956	15.99	Sept. 26, 1956	17.20	Apr. 17, 1957	16.53	Oct. 15, 1957	16.87
July 10	16.37	Dec. 17	17.54	Aug. 13	16.26	Dec. 30	15.77

11N 3W 3-6. Formerly GrAL 258. E. H. Waber. 219 Prospect Ave., Alma. Drilled unused artesian well in deposits of Pleistocene age, diam 2 in, depth 49 ft. Lsd, 733.20 ft above msl. MP, top of 2-in coupling, 1.10 ft above lsd. Highest water level 7.64 below lsd, Feb. 27, 1951; lowest 32.98 below lsd, Dec. 16, 1955. Records available: 1946-57. Water levels affected by pumping.

Apr. 18, 1956	31.93	Sept. 26, 1956	25.52	Apr. 17, 1957	21.76	Oct. 15, 1957	29.07
July 10	32.50	Dec. 17	32.06	Aug. 13	26.11	Dec. 30	18.11

## Village of Ithaca

11N 3W 36-1. Formerly GriH 1. Village of Ithaca. Center and Maple Sts., Ithaca. Drilled unused artesian well in Saginaw formation, Parma sandstone, and Bayport limestone, diam 10 to 8 in, reported depth 785 ft, cased to 379. Lsd, 804.50 ft above msl (previously reported about 803 ft above msl). MP, top of pump base, 1.03 ft above lsd. Highest water level 78.25 below lsd, Jan. 22, 1952; lowest 83.96 below lsd, Sept. 4, 1949. Records available: 1947-57.

Apr. 18, 1956	80.25	Sept. 26, 1956	80.66	Apr. 17, 1957	80.35	Oct. 15, 1957	80.45
July 10	80.27	Dec. 17	80.36	Aug. 13	80.79	Dec. 30	79.55

Ingham County

## City of Lansing

4N 2W 4-1. Formerly IgLS 33. Chesapeake & Ohio RR. Filley and Taylor Sts., Lansing. Drilled unused artesian well in sand and gravel of Pleistocene age, diam 12 in, depth 38 ft, screened to 33. Lsd, 842.11 ft above msl. MP, top of recorder base, 3.15 ft above lsd. Highest water level 25.98 below lsd, Mar. 3, 1953; lowest 32.87 below lsd, Dec. 22, 1957. Records available: 1953-57. Water levels affected by pumping.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	30.50	30.62	30.83	31.14	31.26	30.81	30.52	30.45	30.50	30.93	31.03	31.09
10	30.40	30.75	31.21	31.04	30.94	30.78	30.62	30.60	30.37	30.92	31.19	31.06
15	30.43	30.88	31.19	30.82	31.24	30.86	30.58	30.53	30.67	30.81	31.12	31.17
20	30.54	30.84	31.13	31.22	31.13	30.67	30.47	30.59	30.65	30.81	31.15	31.23
25	30.63	30.49	31.15	31.18	31.03	30.79	h30.51	30.72	30.63	30.91	30.71	31.32
Eom	30.87	31.03	31.21	31.29	30.72	30.67	30.48	30.56	30.57	30.83	31.11	30.90
1957												
5	31.26	31.47	31.55	31.20	30.77	30.30	31.77	32.30	32.49	.....	32.39	.....
10	31.23	31.48	31.62	31.31	30.65	30.38	32.05	32.16	32.26	.....	32.72	.....
15	31.22	31.55	31.52	31.17	30.49	30.95	32.05	32.20	32.09	.....	32.63	.....
20	31.17	31.52	31.65	30.86	30.45	31.25	32.02	32.24	32.20	.....	e32.60	h32.33
25	31.17	31.24	31.57	30.89	30.47	31.46	32.14	32.25	h32.30	32.52	.....	32.53
Eom	31.20	31.50	31.62	30.85	30.38	31.74	32.15	32.27	e32.10	32.40	.....	32.55

e Estimated.

h Tape measurement.

4N 2W 9-1. Formerly IgLS 7. City of Lansing. North Grand River Ave. and Josephine St., Lansing. Drilled unused artesian well in Saginaw formation, diam 14 in, depth 395 ft, cased to 49. Lsd, 828.81 ft above msl. MP, top of pump base, 12.40 ft below lsd. Highest water level 15.63 below lsd, Mar. 26, 1931; lowest 154.77 below lsd, Apr. 10, 1956. Records available: 1919, 1929-57. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 10, 1956	154.77	Sept. 25, 1956	147.29	Apr. 22, 1957	146.88	Oct. 24, 1957	141.48
July 9	151.00	Dec. 21	142.84	July 29	141.40	Dec. 23	137.17
Aug. 16	149.34						

#### Lansing Township

4N 2W 24-1. Formerly IgLs 265. Michigan State University. Formerly John Deere Plow Co. NE $\frac{1}{4}$ SW $\frac{1}{4}$  of sec. Drilled unused artesian well in Saginaw formation, diam 10 in, depth 453 ft. Lsd, 853.45 ft above msl. MP, top of recorder base (since Apr. 29, 1957), 1.85 ft above lsd. Highest water level 25.47 below lsd, Mar. 25, 1946; lowest 71.7 below lsd, Aug. 16, 1957. Records available: 1945-57. Water levels affected by pumping.

2 a. m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	51.1	57.3	58.72	56.2	59.4	57.0	54.9	56.4	....	....	....	....
10	54.0	57.5	....	56.0	....	62.1	53.8	55.4	....	....	....	....
15	55.7	56.9	58.40	58.8	....	66.6	56.6	54.3	....	....	....	....
20	57.0	58.8	57.58	61.3	....	60.8	57.4	56.6	....	....	....	....
25	56.4	....	56.67	59.6	59.5	59.2	56.5	....	....	....	....	....
Eom	56.5	58.27	54.12	58.0	58.0	57.4	57.4	....	....	....	....	....
1957												
5	....	....	....	....	64.6	63.6	63.8	63.1	e54.7	64.5	57.1	56.0
10	....	....	....	....	e64.1	68.3	58.8	70.7	....	66.9	59.0	55.4
15	....	....	....	....	65.1	69.3	62.3	69.0	....	64.2	64.5	55.7
20	....	....	....	....	63.2	69.0	67.0	67.7	....	65.2	64.0	55.5
25	....	....	....	....	64.4	66.7	65.7	64.9	54.7	64.9	64.9	e51.1
Eom	....	....	....	....	61.6	e64.1	64.8	65.6	57.8	55.8	h59.85	56.6

e Estimated.

h Tape measurement.

4N 2W 31-1. Formerly IgLs 271. Carlos A. Weber. SW $\frac{1}{4}$ SW $\frac{1}{4}$  of sec. Drilled unused artesian well in Saginaw formation, diam 3 in, depth 204 ft. Lsd, 880.15 ft above msl. MP, top of 3-in coupling (since July 3, 1956), 3.53 ft above lsd. Highest water level 18.92 below lsd, Apr. 26, 1952; lowest 24.77 below lsd, Feb. 2, 1954. Records available: 1944-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1, 1956	24.36	July 3, 1956	22.72	Jan. 30, 1957	24.73	July 30, 1957	23.22
28	24.40	Aug. 1	22.94	Feb. 28	24.62	Aug. 29	23.63
Mar. 27	23.91	28	23.15	Mar. 29	24.65	Sept. 26	24.02
Apr. 10	23.61	Sept. 24	23.71	Apr. 29	24.12	Oct. 30	23.89
30	23.37	Oct. 31	23.97	May 29	22.77	Nov. 29	23.78
May 28	21.47	Nov. 30	24.15	June 29	23.06	Dec. 30	23.50
June 28	22.48	Dec. 28	24.34				

#### City of Mason

2N 1W 5-1. Formerly IgMS 30. City of Mason. Jefferson Ave. and Okemos St., Mason. Drilled unused artesian well in Saginaw formation, diam 6 in, depth 150 ft. MP, top of casing, 3.90 ft above lsd. Highest water level 0.08 below lsd, June 29, 1949; lowest 7.37 below lsd, Sept. 17, 1955. Records available: 1948-57. Measurements by Water Dept. Water levels affected by pumping.

Jan. 7, 1956	3.14	Mar. 31, 1956	2.43	June 25, 1956	3.92	Oct. 13, 1956	4.13
14	3.48	Apr. 7	2.89	30	3.68	20	3.61
21	3.69	14	3.12	July 7	3.39	27	3.18
28	3.79	21	2.49	14	4.79	Nov. 3	2.99
Feb. 4	2.90	28	2.19	21	3.39	10	2.61
11	3.34	May 5	1.89	28	4.34	17	3.08
18	3.18	14	1.25	Sept. 1	4.12	26	3.41
25	2.91	21	1.91	8	3.23	Dec. 1	3.33
Mar. 3	2.89	28	2.18	15	3.49	8	2.29
10	2.76	June 4	3.09	22	3.61	15	2.35
17	2.79	11	4.04	29	3.34	22	2.47
24	2.61	16	3.78	Oct. 6	2.68	29	2.15

## MICHIGAN, KALAMAZOO COUNTY

51

## 2N 1W 5-1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5, 1957	2.86	Mar. 30, 1957	2.29	June 22, 1957	3.72	Sept. 14, 1957	3.12
12	2.90	Apr. 6	2.51	July 6	3.22		2.99
21	2.96	13	2.47		2.34	Oct. 5	3.92
28	2.85	20	3.02	13	2.17		6.61
Feb. 2	2.92	27	3.09	20	2.69	12	3.78
8	2.66	May 3	2.02	27	3.24	19	3.69
17	3.04	10	2.29	Aug. 3	4.02	26	3.54
24	3.79	18	2.80	10	3.93	Dec. 7	3.46
Mar. 3	2.27	25	2.09	17	3.74	14	3.29
9	3.18	June 1	2.57	24	4.56	21	1.88
16	3.07	8	3.07	31	4.07	28	1.95
23	2.64	15	3.28	Sept. 7	3.48		

Iosco County

## Wilbur Township

23N 7E 7-1. Formerly IcWr 1. U. S. Forest Service. NE $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Drilled unused artesian well in sand and gravel of Pleistocene age, diam 6 in, depth 341 ft. MP, top of concrete block (since Sept. 26, 1956), 1.25 ft above lsd. Highest water level 25.13 below lsd, Aug. 3, 1952; lowest 27.94 below lsd, Jan. 3, 10, 1950. Records available: 1948-57.

Jan. 9, 1956	25.86	Sept. 26, 1956	26.05	Apr. 22, 1957	26.64	Oct. 10, 1957	27.02
Apr. 12	26.10	Oct. 23	26.11	July 15	26.72	Dec. 26	26.86
Aug. 20	26.02	Jan. 7, 1957	26.17				

Iron County

## Iron River Township

43N 35W 20-1. Formerly IrIr 2. (W. M. P. No. 25.) Mrs. Bernard Henriksen. SW $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Dug unused water-table well in glacial till, diam 1 in (previously reported as 36 in), depth 48 ft, screened 45-58 (previously cribbed with wood to open bottom). MP, top of pipe (since June 5, 1957), 3.50 ft above lsd. Highest water level 41.66 below lsd, June 20, 1953; lowest 48.29 below lsd, Aug. 15, 1949. Records available: 1945-57. Caved near bottom, December 1956; restored June 5, 1957.

June 25, 1956	44.96	Oct. 23, 1956	44.58	Jan. 31, 1957	g44.96	July 31, 1957	g45.05
July 25	44.79	Nov. 1	g44.32	Feb. 28	g45.02	Aug. 30	g45.08
Aug. 1	g44.10	20	44.62	Mar. 28	g44.88	Sept. 18	45.15
23	44.56	30	g44.60	Apr. 28	g44.85	30	g45.10
Sept. 1	g44.30	Dec. 20	44.73	May 30	g44.91	Oct. 31	g45.22
26	44.47	Jan. 4, 1957	g44.83	July 1	g44.94	Dec. 2	g45.33
Oct. 1	g44.38						

g By Wisconsin-Michigan Power Co.

Kalamazoo County

## Kalamazoo Township

28 11W 20-7. Formerly KoKO 42. Western Michigan College of Education. SW $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Drilled unused artesian well in deposits of Pleistocene age, diam 8 in, depth 78 ft. Lsd, 868.68 ft above msl. MP, top of casing, 3.00 ft below lsd. Highest water level 33.44 below lsd, June 19, 1950; lowest 36.90 below lsd, Oct. 18, 1957. Records available: 1946-57.

Apr. 25, 1956	35.73	Oct. 4, 1956	35.74	Apr. 18, 1957	36.31	Oct. 18, 1957	36.90
July 17	35.34	Dec. 19	36.06	Sept. 15	36.76	Dec. 26	36.40

## City of Kalamazoo

2S 11W 27-52. Formerly KoKO 284. Bryant Paper Co. Alcott and Portage Sts., Kalamazoo. Drilled unused artesian well in sand and gravel of Pleistocene age, diam 12 in, depth 113 ft, screened 83-113. Lsd, 802.59 ft above msl. MP, top of 12-in flange, 2.46 ft above lsd. Highest water level 34.46 below lsd, May 5, 1950; lowest 64.37 below lsd, Sept. 1, 1946. Records available: 1946-57. Measurements by City Water and Light Utilities. Water levels affected by pumping.

2S 11W 27-52--Continued.

## 2 a. m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	40.75	41.22	41.30	41.36	41.29	40.70	41.50	42.10	42.90	43.44	43.68	.....
10	.....	41.64	41.65	41.24	41.08	40.74	41.68	42.49	42.72	43.47	43.78	43.23
15	40.78	41.70	41.72	41.20	40.85	41.27	41.70	42.31	43.15	.....	43.80	43.52
20	41.12	41.44	.....	41.72	40.73	41.43	41.96	42.39	43.18	43.77	.....	h43.39
25	41.14	41.81	41.56	41.80	40.90	41.37	42.01	42.69	43.02	43.80	.....	43.17
Eom	41.32	41.69	41.67	41.44	40.67	41.65	42.06	43.00	43.13	43.78	.....	42.97

1957

5	43.24	43.19	43.56	44.09	43.71	43.90	43.95	44.53	45.62	45.99	45.86	45.30
10	43.23	43.16	43.59	43.95	43.82	43.60	44.10	45.10	45.62	46.03	45.86	45.12
15	43.18	.....	43.84	43.73	43.71	44.17	44.00	45.33	45.56	46.02	45.96	45.21
20	43.11	43.37	43.84	h44.10	43.42	44.06	44.45	45.39	45.85	46.19	45.62	45.01
25	43.21	43.26	43.70	44.07	43.80	44.18	44.53	45.65	45.73	46.19	45.23	44.72
Eom	43.27	43.57	43.88	43.88	43.50	44.22	44.65	45.90	45.46	46.04	45.32	44.75

h Tape measurement.

Marquette County

## Republic Township

45N 30W 1-1. Formerly MgRe 1. (W. M. P. No. 4.) Arnold Janofski. SW $\frac{1}{4}$ NW $\frac{1}{4}$  of sec. Dug unused water-table well in glacial till, diam 36 in, depth 30 ft, cased with corrugated metal pipe. MP, top of  $\frac{1}{2}$ -in pipe standard, 2.50 ft above lsd. Highest water level 24.38 below lsd, Dec. 13, 1951; lowest 29.28 below lsd, Mar. 15, 1949. Records available: 1945-57. Measurements by Wisconsin-Michigan Power Co.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30, 1956	26.52	Aug. 1, 1956	26.00	Jan. 31, 1957	26.48	Aug. 1, 1957	26.43
Feb. 28	26.69	Sept. 1	25.85	Feb. 28	26.64	30	26.63
Mar. 29	26.87	Oct. 1	25.71	Mar. 28	26.71	Sept. 30	26.82
Apr. 30	26.92	Nov. 1	25.88	May 1	26.41	Oct. 31	26.94
May 31	26.45	30	26.06	30	26.22	Dec. 2	27.08
July 3	26.37	Jan. 4, 1957	26.11	July 1	26.27		

Mason County

## Logan Township

17N 15W 3-1. Formerly MaLo 1. State Dept. of Conservation. U. S. Forest Service. Manistee National Forest. SE $\frac{1}{4}$ SW $\frac{1}{4}$  of sec. Drilled unused water-table well in deposits of Pleistocene age, diam 6 in, depth 32 ft. Lsd, 737.37 ft above msl. MP, top of concrete block, 1.04 ft above lsd. Highest water level 14.44 below lsd, May 15, 1952; lowest 19.30 below lsd, Dec. 31, 1957. Records available: 1948-57. Jan. 11, 1956, 18.47; Apr. 18, 17.20; Oct. 25, 17.46; Apr. 30, 1957, 19.07; July 18, 18.01; Nov. 4, 19.14; Dec. 31, 19.30.

Montcalm County

## City of Greenville

9N 8W 15-1. Formerly MmGV 9. City of Greenville. Fairplain St. and Pere Marquette RR., Greenville. Drilled unused artesian well in gravel of Pleistocene age, diam 12 in, depth 65 ft, screened 45-65. MP, top of  $\frac{1}{2}$ -in nipple, 2.60 ft above lsd. Highest water level 11.40 below lsd, Apr. 1, 1950; lowest 17.36 below lsd, Aug. 3, 1955. Records available: 1950-57. Measurements by City Waterworks. Water levels affected by pumping.

Jan. 4, 1956	15.17	Apr. 4, 1956	14.61	July 4, 1956	15.18	Oct. 10, 1956	14.76
11	15.68	11	14.46	11	15.02	17	15.03
18	15.44	18	14.42	18	15.78	24	14.98
25	15.42	25	15.57	25	14.62	Nov. 1	15.83
Feb. 1	15.45	May 2	14.09	Aug. 1	15.89	7	15.84
8	15.50	9	13.60	8	15.62	14	15.19
15	15.45	16	13.16	15	15.94	21	14.76
22	15.29	23	13.84	22	15.61	28	14.42
Mar. 1	15.32	June 1	14.42	29	14.75	Dec. 5	14.96
7	14.50	6	14.84	Sept. 5	14.83	12	15.67
14	15.48	13	16.96	12	15.05	19	15.67
21	15.44	20	14.96	26	15.07	26	14.53
28	15.29	27	15.09	Oct. 3	15.09	Jan. 2, 1957	13.37

## 9N 8W 15-1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9, 1957	14.97	Feb. 20, 1957	15.46	Apr. 3, 1957	14.43	Aug. 1, 1957	17.00
16	15.37	27	15.62	9	14.54	Sept. 1	15.00
23	15.16	Mar. 6	15.07	May 4	14.90	Oct. 1	15.70
30	15.42	13	14.83	June 4	14.90	Nov. 1	14.95
Feb. 6	15.08	20	14.51	July 1	14.10	Dec. 2	14.4
13	15.81	27	14.71				

Montmorency County

## Albert Township

29N 2E 22-1. Formerly Myab 1. State Dept. of Conservation. SW $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Drilled unused artesian well in deposits of Pleistocene age, diam 6 in, depth 64 ft. MP, top of  $\frac{3}{4}$ -in pipe extension, 15.65 ft above lsd. Highest water level 11.39 above lsd, Apr. 19, 1956; lowest 4.95 below lsd, Jan. 29, 1949. Records available: 1948-53, 1956-57. Apr. 19, 1956, +11.39; Aug. 21, +9.95; Oct. 31, +9.68; Apr. 26, 1957, +5.20; July 16, +5.25.

Oakland County

## City of Pontiac

3N 10E 32-1. Formerly OaPT 1. City of Pontiac. Walnut and Wessen Sts., Pontiac. Drilled unused artesian well in sand and gravel of Pleistocene age, diam 8 in, depth 160 ft. Lsd, 921.88 ft above msl (previously reported as 919.15 ft). MP, top of recorder base, 2.75 ft above lsd. Highest water level 59.55 below lsd, Apr. 22, 1940; lowest 129.5 below lsd, Aug. 5, 1955. Records available: 1939-57. Measurements by Dept. of Water Supply. Water levels affected by pumping.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	e119.9	118.6	117.9	119.5	116.7	114.7	117.2	117.4	117.3	115.9	115.0	114.2
10	e119.1	120.0	120.3	118.8	115.7	116.9	115.6	118.7	117.2	116.0	115.7	115.7
15	e119.5	119.7	119.9	117.7	116.3	119.2	117.5	118.4	117.5	115.3	115.5	114.1
20	119.9	118.0	119.8	118.9	115.4	117.1	117.8	116.9	116.2	116.3	114.9	112.1
25	119.5	119.3	118.7	118.4	116.6	116.4	118.3	117.4	115.7	116.3	112.9	110.9
Eom	.....	119.7	118.7	116.2	115.0	117.0	118.7	117.2	115.6	115.9	114.0	.....
1957												
5	e113.0	113.8	113.2	111.9	112.5	113.3	113.2	116.2	e115.8	113.8	114.0	113.9
10	112.8	111.6	112.2	112.0	113.3	113.2	115.0	117.6	e116.5	114.4	114.8	113.2
15	e114.5	114.0	113.8	111.3	112.9	114.8	113.7	117.8	114.4	114.8	113.6	113.7
20	113.7	113.8	112.7	111.6	110.5	114.8	114.9	117.2	114.3	114.0	114.4	113.2
25	114.8	111.8	112.3	112.8	112.5	114.9	115.3	116.3	114.0	114.1	113.6	112.3
Eom	113.4	114.5	112.0	112.2	111.7	114.1	116.4	117.1	112.6	113.6	114.0	112.0

~ Estimated.

## City of Bloomfield Hills

2N 10E 22-1. Formerly OaBH 2. Cranbrook School. NE $\frac{1}{4}$ NW $\frac{1}{4}$  of sec. Drilled unused artesian well in sand and gravel, diam 6 in, depth 65 ft, screened 58-65. MP, top of casing, 5.20 ft below lsd. Highest water level 11.00 below lsd, Apr. 30, 1956; lowest 17.60 below lsd, Sept. 26, 1955. Records available: 1950-57. Measurements by Water Dept. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	16.08	Apr. 2, 1956	12.00	July 16, 1956	12.29	Nov. 13, 1956	14.29
9	16.21	9	11.60	23	13.21	27	14.26
16	16.60	17	12.00	30	13.29	Dec. 3	15.21
17	16.53	23	12.30	Aug. 7	13.24	10	14.28
24	16.76	30	11.00	13	12.27	17	14.29
31	16.88	May 7	11.40	Sept. 4	12.23	26	14.24
Feb. 6	16.90	14	11.10	10	12.24	Jan. 2, 1957	14.24
13	17.00	21	11.40	18	13.23	7	14.28
20	17.05	June 4	11.50	24	13.27	14	15.50
27	16.15	11	12.40	Oct. 1	14.22	21	15.40
Mar. 5	14.50	18	12.50	8	14.28	29	14.28
12	12.80	25	12.50	16	14.29	Feb. 4	14.28
19	12.70	July 3	12.26	29	15.30	11	14.27
26	12.50	9	12.26	Nov. 5	15.30	20	14.20

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

2N 10E 22-1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 25, 1957	14.10	May 21, 1957	11.28	July 29, 1957	11.28	Oct. 7, 1957	16.00
Mar. 5	13.21	27	12.21	Aug. 13	13.24	15	14.98
11	13.21	June 4	12.22	19	14.21	21	14.79
26	12.70	17	12.28	26	14.24	Nov. 5	13.57
Apr. 1	12.25	24	13.20	Sept. 3	14.55	18	12.58
8	11.28	July 1	13.23	9	14.55	Dec. 3	12.90
16	11.27	9	11.27	16	14.55	9	12.80
29	12.20	15	11.26	23	14.53	23	11.20
May 6	12.23	22	11.29	30	14.55	31	11.01
13	12.24						

Ogemaw County

## Klacking Township

23N 2E 2-1. Formerly CgKa 1. Charles Hudson. NE $\frac{1}{4}$ NW $\frac{1}{4}$  of sec. Dug unused water-table well in deposits of Pleistocene age, 36 by 48 in., depth 6 ft, planked to open bottom. MP, top of recorder base, 3.35 ft above lsd. Highest water level 0.37 below lsd, May 5, 1952; lowest 4.35 below lsd, Mar. 1, 1956. Records available: 1951-57.

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	....	....	2.07	1.57	1.31	1.08	1.38	1.90	1.74	1.83	2.06
10	....	....	2.70	1.72	1.53	1.36	1.13	1.48	1.99	1.83	1.90	2.10
15	....	....	2.76	1.81	1.51	1.37	1.18	1.55	1.97	1.72	1.95	2.14
20	....	....	2.40	1.75	1.48	1.25	1.23	1.66	2.06	1.77	1.86	2.18
25	....	....	1.88	1.67	1.48	1.27	1.30	1.74	2.07	1.79	1.92	2.22
Eom	....	....	1.90	1.63	1.41	1.10	1.31	1.82	2.09	1.81	2.00	2.24

## 1955

5	2.28	2.52	e2.68	1.66	1.36	1.57	1.93	2.46	2.95	3.34	3.32	2.99
10	2.30	2.53	2.60	1.60	....	1.62	2.03	2.37	2.90	3.21	3.25	3.10
15	2.33	2.59	2.24	1.53	....	1.66	2.16	2.36	2.96	3.38	3.25	3.19
20	2.39	2.60	2.29	1.50	1.46	1.72	2.15	e2.66	3.09	3.42	3.31	3.28
25	2.43	2.59	2.06	1.37	1.22	1.78	2.31	2.79	3.19	3.28	3.11	3.22
Eom	2.47	2.64	1.81	1.38	1.53	1.84	2.46	e2.74	3.22	3.39	3.23	3.33

## 1956

5	3.39	3.76	3.71	2.40	1.50	e1.56	1.62	1.69	1.92	2.12	2.38	2.58
10	3.46	3.81	3.63	1.80	1.46	e1.62	1.67	1.77	1.96	2.15	2.41	2.51
15	3.52	3.85	3.82	1.61	1.49	1.68	1.76	1.86	2.01	2.19	2.46	2.60
20	3.59	3.91	3.94	1.58	1.50	1.67	1.78	1.90	2.00	2.23	2.46	...
25	3.64	3.98	3.79	1.56	1.54	1.73	1.73	1.91	2.04	2.29	2.50	...
Eom	3.70	4.03	3.64	1.48	1.52	1.73	1.79	1.75	2.08	2.33	2.55	...

## 1957

5	...	2.85	2.54	2.34	1.93	1.70	1.59	1.83	1.97	2.30	2.54	2.02
10	2.90	2.90	2.58	2.20	1.84	1.69	1.64	1.66	2.05	2.36	...	2.00
15	2.98	3.00	2.28	2.18	1.58	1.68	1.65	1.83	2.05	2.42	...	2.07
20	3.05	3.07	2.48	2.12	1.76	1.71	1.70	1.88	2.10	2.43	...	1.85
25	...	3.12	2.40	1.90	1.73	1.69	1.73	1.89	2.15	2.27	2.05	2.02
Eom	e2.75	2.17	2.44	1.98	1.68	1.60	1.78	1.95	e2.23	2.47	2.02	e2.04

e Estimated.

Presque Isle County

## Allis Township

33N 2E 30-1. Formerly PrAs 18. State Dept. of Conservation. NE $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Jetted observation water-table well in deposits of Pleistocene age, diam 2 in., depth 14 ft, open bottom. MP, top of casing, 1.20 ft above lsd. Highest water level 1.80 below lsd, May 23, 1938; lowest 5.69 below lsd, Jan. 27, 1956. Records available: 1934-44, 1948-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27, 1956	5.69	Oct. 31, 1956	4.12	Apr. 26, 1957	4.21	Oct. 9, 1957	3.36
Apr. 13	5.25	Jan. 8, 1957	4.40	July 16	2.62	Dec. 27	3.20
Aug. 21	3.53						

Roscommon County

## Higgins Township

24N 2W 20-1. Formerly RoHg 1. State Dept. of Conservation. NE $\frac{1}{4}$ NW $\frac{1}{4}$  of sec. Jetted observation water-table well in sand of Pleistocene age, diam 8 in., depth 14 ft, open bottom. Lsd, 1, 145.30 ft above msl. MP, top of pipe, 2.50 ft above lsd. Highest water level 2.78 below lsd, May 3, 1951; lowest 6.23 below lsd, Dec. 6-11, 1949. Records available: 1934-57. For additional measurements, see Giroux (1958).

2 a.m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	5.95	6.04	6.02	5.00	4.38	4.55	4.70	4.89	5.12	5.26	5.43	5.53
10	5.96	6.05	5.94	4.42	4.39	4.61	4.83	4.87	5.14	5.29	5.45	5.45
15	5.97	6.05	5.99	4.31	4.38	4.70	4.96	4.97	5.17	5.31	5.48	5.48
20	5.99	6.07	6.02	4.34	4.41	4.79	5.02	5.03	5.18	5.34	5.49	5.50
25	6.01	6.08	5.90	4.39	4.44	4.87	4.88	5.08	5.21	5.36	5.49	5.52
Eom	6.01	6.08	5.88	4.41	4.48	4.95	5.03	5.00	5.24	5.40	5.51	5.53
1957												
5	5.56	5.51	5.44	5.10	4.83	4.46	4.25	4.20	4.36	4.77	4.82	4.36
10	5.57	5.55	5.52	4.92	4.87	4.50	3.96	4.15	e4.47	4.81	4.85	4.38
15	5.59	5.59	4.93	4.89	4.78	4.52	3.58	4.35	4.55	4.84	4.68	4.46
20	5.60	5.62	5.11	4.87	4.80	4.60	3.71	4.45	4.64	4.87	4.42	4.38
25	5.31	5.63	5.06	4.84	4.43	4.67	3.83	4.55	4.67	4.76	4.33	4.44
Eom	5.44	....	5.11	4.83	4.44	4.23	4.00	4.65	4.72	4.77	4.36	4.49

e Estimated.

Sanilac County

## Moore Township

12N 13E 33-1. Formerly SaMr 1. State Highway Dept. SE $\frac{1}{4}$ SE $\frac{1}{4}$  of sec. Driven unused artesian well in lower Marshall formation, diam 3 in., depth 150 ft, cased to 53. MP, top of 1 $\frac{1}{2}$ -in. pipe extension, 1.00 ft above lsd. Highest water level 15.45 below lsd, Apr. 25, 1951; lowest 23.42 below lsd, Feb. 1, 15, 1956. Records available: 1948-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4, 1956	23.15	July 4, 1956	18.74	Jan. 9, 1957	21.77	July 10, 1957	17.40
11	23.22	11	18.56	16	21.84	17	17.22
18	23.28	18	18.68	23	21.90	24	17.36
27	23.30	25	18.70	30	21.58	31	17.87
Feb. 1	23.42	Aug. 1	19.08	Feb. 6	21.57	Aug. 8	18.10
8	23.29	8	19.01	13	21.04	14	18.30
15	23.42	15	19.02	20	21.01	20	18.60
22	23.23	23	19.15	27	20.70	28	18.87
29	23.27	29	19.37	Mar. 6	20.07	Sept. 4	18.86
Mar. 7	22.90	Sept. 5	19.60	13	19.93	11	19.24
14	22.24	12	19.78	20	19.39	18	19.54
21	21.80	19	19.99	27	19.03	25	19.55
28	21.40	26	20.20	Apr. 3	18.70	Oct. 2	19.75
Apr. 4	20.87	Oct. 3	20.55	10	18.05	9	19.02
11	20.55	17	21.08	17	18.00	16	20.10
18	20.30	24	21.34	24	17.64	23	20.14
25	20.45	31	21.20	May 1	17.17	30	20.05
May 2	19.50	Nov. 7	21.23	6	17.43	Nov. 6	20.20
9	18.46	14	21.38	13	16.94	13	20.22
16	17.65	21	21.26	20	16.40	20	19.80
23	17.54	28	21.50	27	16.94	27	19.61
30	17.74	Dec. 5	21.63	June 5	16.97	Dec. 4	19.57
June 6	18.00	12	21.92	12	17.44	11	19.10
13	18.49	19	21.81	19	17.60	18	19.36
20	18.50	26	21.95	26	17.64	26	18.32
27	18.27	Jan. 2, 1957	21.95	July 3	17.52		

Schoolcraft County

## Germfask Township

45N 13W 16-1. Formerly SoGe 112. U. S. Fish and Wildlife Service. SW<sub>1</sub>SW<sub>4</sub> of sec. Drilled unused artesian well in Richmond group, diam 4 in, depth 151 ft, cased to about 65. MP, top of casing, 3,60 ft above lsd. Highest water level 5.09 below lsd, Apr. 12, 1954; lowest 6.28 below lsd, Sept. 26, 1955. Records available: 1952-57. Measurements by Fish and Wildlife Service. For additional measurements, see Giroux (1958).

2 a. m. water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	5.70	5.67	5.67	5.56	5.77	5.78	5.77	5.75	5.89	5.83	5.91	5.64
10	5.71	5.68	5.72	5.61	5.78	5.79	5.65	5.75	5.84	5.85	5.86	5.65
15	5.69	5.69	5.70	5.72	5.74	5.84	5.62	5.82	5.85	5.83	5.80	5.65
20	5.68	5.68	5.70	5.78	5.74	5.84	5.69	5.88	5.81	5.85	5.75	5.61
25	5.72	5.60	5.69	5.81	5.77	5.79	5.68	5.85	5.80	5.88	5.61	5.56
Eom	5.70	5.68	5.65	5.78	5.68	5.73	5.77	5.80	5.79	5.84	5.62	....

1957

5	5.52	5.47	5.37	5.53	5.59	5.53	5.50	5.86	5.77	5.80	5.72	5.57
10	5.49	5.43	5.37	5.63	....	5.54	5.64	e5.90	5.84	5.80	5.65	5.50
15	5.48	5.45	5.27	5.73	5.48	5.50	e5.65	5.90	5.82	5.79	5.49	5.55
20	5.45	5.42	5.30	5.45	5.49	5.58	5.72	5.87	5.77	5.76	5.46	5.42
25	5.45	5.35	5.51	5.58	5.52	5.57	5.73	5.76	5.72	5.72	5.56	5.46
Eom	e5.44	5.38	5.49	5.59	5.45	5.57	5.78	5.84	5.76	5.70	5.55	5.46

e Estimated.

Washtenaw County

## Ypsilanti Township

3S 7E 24-1. Formerly WaYp 8. Ford Motor Co. NE<sub>4</sub>SW<sub>4</sub> of sec. Drilled unused water-table well in sand of Pleistocene age, diam 4 in, depth 87 ft, screened 77-80. Lsd, 665.56 ft above msl. MP, top of 4-in coupling, 3,00 ft above lsd. Highest water level 5.79 below lsd, Jan. 5, 1950; lowest 16.43 below lsd, Oct. 16, 1956. Records available: 1949-57. Measurements by Water Filtration Plant. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13, 1956	15.05	Oct. 4, 1956	14.95	Mar. 21, 1957	15.34	Aug. 3, 1957	14.69
27	15.32	16	16.43	Apr. 11	15.28	Sept. 3	14.37
Mar. 3	14.71	30	15.38	25	15.26	17	14.41
June 1	14.06	Nov. 17	15.26	May 10	15.38	Oct. 3	14.42
19	14.44	Dec. 17	15.30	22	14.92	25	13.20
29	14.44	Feb. 6, 1957	15.25	June 14	15.10	Nov. 7	13.12
July 17	13.70	28	15.59	July 9	14.75	Dec. 4	13.84
Aug. 2	14.28	Mar. 14	15.35				

## York Township

4S 6E 10-1. Formerly WaYk 22. Ypsilanti State Hospital. SW<sub>1</sub>NW<sub>4</sub> of sec. Drilled unused artesian well in gravel of Pleistocene age, diam 6 in, depth 173 ft. MP, top of recorder base, 0.90 ft above lsd. Highest water level 61.48 below lsd, June 12, 1953; lowest 88.27 below lsd, July 8, 1955. Records available: 1946-57. Measurements by Ypsilanti State Hospital. Water levels affected by pumping.

Jan. 6, 1956	67.30	May 18, 1956	68.16	Sept. 7, 1956	66.84	Dec. 28, 1956	78.13
13	76.16	25	79.73	14	74.60	Jan. 11, 1957	73.16
19	79.96	June 1	66.18	21	74.25	25	67.57
27	67.18	8	67.60	28	79.09	Feb. 1	83.00
Feb. 10	69.58	15	81.14	Oct. 5	66.70	8	69.75
17	75.99	22	68.78	11	70.27	14	79.78
24	77.01	29	82.93	19	76.45	21	73.95
Mar. 1	74.45	July 6	76.46	26	77.28	Mar. 1	82.32
9	81.15	13	73.70	Nov. 2	80.99	8	74.29
16	71.15	20	75.87	9	83.10	15	81.30
23	73.29	27	75.20	16	66.65	21	82.43
30	67.52	Aug. 3	83.10	23	81.10	29	75.73
Apr. 6	66.70	10	75.94	30	67.12	Apr. 5	86.92
13	71.39	17	75.65	Dec. 7	76.84	12	80.86
20	68.75	24	74.70	14	70.68	19	86.90
27	67.45	31	83.77	21	74.43	25	85.49

## 4S 6E 10-1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 6, 1957	83.42	July 12, 1957	84.69	Sept. 13, 1957	80.80	Nov. 8, 1957	81.62
17	83.95	19	79.70	20	80.55	14	71.25
24	84.23	26	83.55	27	72.70	22	80.43
31	84.23	Aug. 2	70.27	Oct. 4	68.50	29	80.51
June 7	70.43	9	83.70	11	84.03	Dec. 8	67.68
14	69.80	16	80.94	18	82.42	13	82.10
21	80.80	26	84.93	24	81.43	20	71.20
28	79.19	30	79.20	Nov. 1	67.20	27	68.10
July 7	79.20	Sept. 6	80.09				

Wexford County

## Henderson Township

21N 11W 13-1. Formerly WeHn 1. State Dept. of Conservation. NW $\frac{1}{4}$ NE $\frac{1}{4}$  of sec. Drilled unused water-table well in deposits of Pleistocene age, diam 6 in, depth 62 ft. MP, top of casing, 1.40 ft above lsd. Highest water level 46.28 below lsd, June 5, 1952; lowest 50.16 below lsd, Dec. 31, 1957. Records available: 1948-57.

Jan. 11, 1956	49.29	Oct. 25, 1956	48.73	Apr. 30, 1957	49.94	Nov. 4, 1957	49.87
Apr. 18	49.78	Jan. 10, 1957	49.34	July 18	49.45	Dec. 31	50.16
Aug. 23	48.96						

## City of Cadillac

21N 9W 4-1. Formerly WeCD 1. City of Cadillac. NW $\frac{1}{4}$ NE $\frac{1}{4}$  of sec. Drilled unused artesian well in deposits of Pleistocene age, diam 8 to 6 in, reported depth 277 ft. MP, top of pump base, 0.10 ft above lsd. Highest water level 19.99 below lsd, July 6, 1953; lowest 23.24 below lsd, Feb. 14, 1951. Records available: 1949-57.

Jan. 11, 1956	21.01	Oct. 30, 1956	21.96	Apr. 30, 1957	22.85	Oct. 25, 1957	22.97
Apr. 17	21.30	Jan. 10, 1957	22.06	July 18	22.80	Dec. 31	22.91
Aug. 22	21.59						

## References

- Giroux, P. R., 1958, Summary of ground-water conditions in Michigan, 1956: Michigan Geol. Survey Water-Supply Rept. 1.  
 Vanlier, K. E., and Deutsch, Morris, 1958, Reconnaissance of the ground-water resources of Chippewa County, Michigan: Michigan Geol. Survey Prog. Rept. 17.

## NEW HAMPSHIRE

By Edward Bradley and J. M. Weigle

The observation-well program was continued during 1956 and 1957 in cooperation with the New Hampshire Water Resources Board. Figure 8 shows the location of observation wells included in this report.

### Well-Numbering System

Wells are designated by town or city names and serial numbers assigned within each town.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum.

#### Merrimack County

Concord 1. U. S. Geol. Survey. Lat  $43^{\circ}15'25''$ , long  $71^{\circ}34'58''$ . Driven observation well in stratified sand, diam  $\frac{3}{4}$  in., depth 11 ft, well point 2 ft by  $1\frac{1}{4}$  in. Lsd, about 345 ft above msl. MP, top of steel pipe, 2.80 ft above lsd. Highest water level 0.49 below lsd, Apr. 24, 1956; lowest 5.12 below lsd, Sept. 28, 1955. Records available: 1955-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 1, 1955	4.82	Apr. 5, 1956	2.00	Aug. 6, 1956	3.84	Apr. 2, 1957	1.87
28	5.12	24	.49	Oct. 9	3.97	29	2.38
Nov. 28	3.12	June 13	1.70	25	4.35	Aug. 13	4.83
Dec. 28	3.77	26	2.64	Jan. 2, 1957	3.44	Dec. 10	3.86
Feb. 13, 1956	3.02						

Hill 1. J. E. Norcross. Lat  $43^{\circ}33'54''$ , long  $71^{\circ}44'50''$ . Dug unused water-table well in sandy glacial till, diam 18 in., depth 11 ft. Lsd, about 500 ft above msl. MP, east side of rock casing, 2.00 ft above lsd. Highest water level 2.43 below lsd, Apr. 13, 1952; dry several times, 1947-50. Records available: 1942-57. June 27, 1956, 5.82; Oct. 25, 6.86; Apr. 2, 1957, 4.14.

New London 1. W. S. Mariner. Lat  $43^{\circ}23'46''$ , long  $71^{\circ}57'09''$ . Dug unused water-table well in sandy glacial till, diam 36 in., depth 21 ft. Lsd, about 1,020 ft above msl. MP, chiseled cross on east side of rock casing, at lsd. Highest water level 0.87 below lsd, Apr. 6, 1952; lowest 16.43 below lsd, Feb. 8, 1948. Records available: 1947-57.

Jan. 5, 1956	9.58	May 7, 1956	4.52	Aug. 29, 1956	12.41	Apr. 30, 1957	7.81
10	7.45	23	6.81	Sept. 30	13.10	May 30	9.07
30	8.61	28	7.31	Oct. 30	13.68	July 31	12.36
Feb. 15	10.19	June 11	5.53	Nov. 30	14.40	Aug. 31	12.80
Mar. 14	11.50	26	8.08	Jan. 30, 1957	6.83	Oct. 6	14.15
Apr. 4	11.99	27	8.29	Feb. 28	6.85	30	14.56
16	6.30	July 29	10.82	Mar. 30	5.40	Dec. 2	7.83
30	3.70						

#### Rockingham County

Auburn 8. Manchester Waterworks. Lat  $43^{\circ}00'21''$ , long  $71^{\circ}18'46''$ . Dug unused water-table well in unconsolidated deposits, diam 32 in., depth 8 ft. Lsd, about 300 ft above msl. MP, edge of steel plate attached to horizontal beam, at lsd. Highest water level 0.50 below lsd, Mar. 22, 1948; dry several times, 1957. Records available: 1942-57.

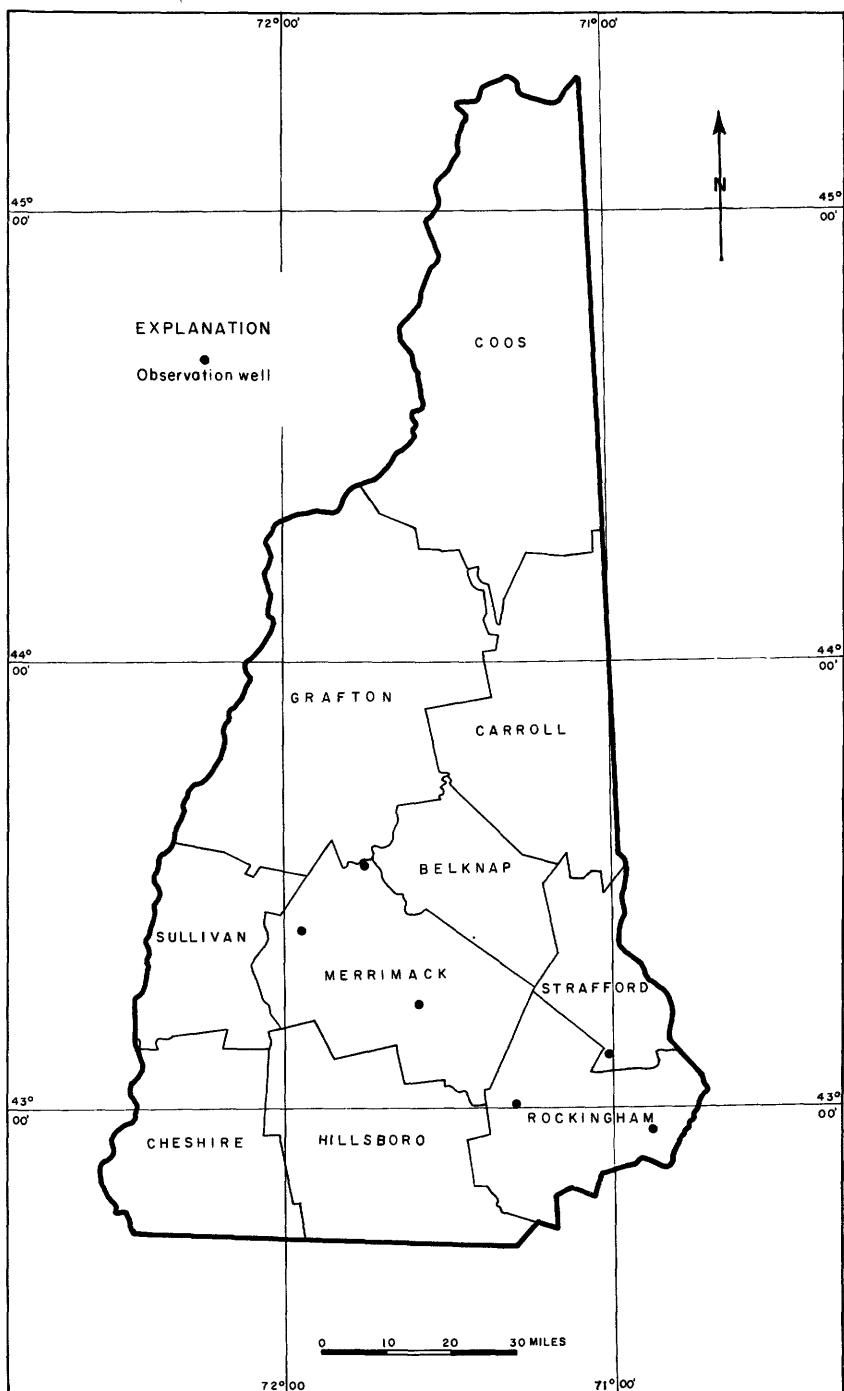


Figure 8. -- Location of observation wells in New Hampshire, 1956-57.

## Auburn 8--Continued.

Noon water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	1.75	1.70	1.45	1.43	1.85	3.60	4.73	5.96	5.92	5.48	4.34
10	1.38	1.70	1.75	1.42	1.53	2.03	2.27	5.13	6.14	5.60	5.52	4.02
15	1.38	1.70	1.78	1.13	1.74	2.50	2.47	5.48	6.31	5.71	5.53	2.93
20	1.53	1.76	1.80	1.32	1.87	2.76	3.25	5.56	6.15	5.85	5.59	2.71
25	1.61	1.77	1.78	1.37	2.03	2.85	3.48	5.73	5.77	5.47	4.92	2.20
Eom	1.72	1.79	1.76	.98	1.99	....	4.23	6.03	5.73	5.39	4.35	2.29

1957												
5	e2.35	1.72	1.70	1.58	2.18	2.58	4.30	6.12	7.33	(f)	(f)	6.68
10	2.36	1.63	1.58	1.50	2.44	2.93	4.63	6.34	7.52	(f)	(f)	6.53
15	e2.25	1.70	1.52	1.62	2.10	e3.35	5.08	6.57	7.68	(f)	(f)	e4.80
20	e2.25	1.72	e1.56	1.73	2.32	3.15	5.47	6.76	(f)	(f)	7.30	4.35
25	1.90	1.72	1.59	1.87	2.48	3.95	5.82	6.97	(f)	(f)	7.31	3.11
Eom	1.86	1.58	1.58	2.00	2.50	e3.81	5.98	7.17	(f)	(f)	7.30	2.48

e Estimated.

f Dry.

Hampton 1. Charles Mathews. Top of Bride Hill on State Highway 101-C. Lat 42°57'58", long 70°53'25". Dug unused water-table well in till of Pleistocene age, diam 42 in, depth 28 ft, lined with stone. Lsd, about 142 ft above msl. MP, bottom edge of pump base on wooden cover, at lsd. Highest water level 6.29 below lsd, Apr. 27, 1956; lowest 26.53 below lsd, Nov. 26, 1957. Records available: 1953-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31, 1956	12.01	Aug. 1, 1956	18.11	Feb. 25, 1957	13.52	Oct. 30, 1957	26.08
Feb. 29	12.43	29	20.87	May 1	13.40	Nov. 13	26.45
Mar. 30	12.58	Oct. 2	23.08	June 28	18.64	18	26.49
Apr. 27	6.29	30	23.78	July 25	20.69	26	26.53
June 2	13.02	Nov. 30	17.66	Aug. 21	22.96	Dec. 4	26.21
29	15.15	Dec. 28	13.15	Oct. 1	25.06	31	16.65

Strafford County

Lee 1. Mrs. Mildred Carlson. About 200 ft west of center of town of Lee. Lat 43°07'15", long 71°00'47". Dug unused water-table well in sand and gravel of Pleistocene age, diam 42 in, depth 33 ft, lined with stone. Lsd, about 190 ft above msl. MP, top of stone cover, at lsd. Highest water level 30.10 below lsd, June 1, 1954; lowest 32.16 below lsd, Sept. 30, 1957. Records available: 1953-57.

Jan. 31, 1956	30.84	Aug. 1, 1956	30.71	Feb. 1, 1957	31.01	Aug. 2, 1957	31.92
Feb. 29	31.14	31	31.65	28	31.28	Sept. 3	32.06
Mar. 29	31.19	Oct. 11	31.62	Apr. 5	31.18	30	32.16
Apr. 27	30.12	30	31.66	May 1	31.14	Oct. 30	31.66
May 29	30.71	Nov. 30	31.56	30	31.42	Nov. 30	31.56
June 29	31.02	Dec. 28	31.04	June 28	31.63	Dec. 28	31.04

## NEW JERSEY

By Charles R. Austin

The observation-well program in New Jersey was continued in 1956-57 in cooperation with the State Department of Conservation and Economic Development, Division of Water Policy and Supply. Figure 9 shows the location of observation wells included in this report.

### Well-Numbering System

The well-numbering system is based on the State topographic atlas sheets. The first segment of the number is that of the atlas sheet on which the well location may be found. The second refers to the 6-minute rectangle in which the well is situated. The third refers to the 2-minute rectangle into which the 6-minute rectangle is subdivided. Each of the 2-minute rectangles is divided into 9 equal rectangles which are numbered from 1 to 9, beginning in the upper left corner and numbering to the right. These divisions are again divided into 9 equal rectangles and numbered in the same way.

### Well Descriptions and Water-Level Measurements

Water levels are in feet referred to mean sea level. Those shown between plus signs are above mean sea level, and those between minus signs are below sea level.

#### Atlantic County

36.13.2.9.1. (A.C. 600-ft) Atlantic City Water Dept. Pumping station between Absecon and Pleasantville. Lat  $39^{\circ}24'30''$ , long  $74^{\circ}30'35''$ . Drilled unused artesian well in Atlantic City 800-ft sand unit of Kirkwood formation, diam 10 in, depth 692 ft. Lsd, 11.78 ft above msl (previously reported as 12.58 ft above msl). MP, top of casing, 0.80 ft above lsd. Highest water level 3.05 below msl, Mar. 28, 1925; lowest 30.0 below msl, Oct. 11, 1954. Records available: 1925-57.

End-of-day water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-23.2	-22.1	-21.1	-20.1	-19.7	-19.4	-19.6	-20.7	-22.3	-23.4	-22.8	-21.8
10	22.8	21.8	20.9	19.9	19.6	19.4	19.7	20.9	22.5	23.4	22.6	21.6
15	22.5	21.6	20.8	19.8	19.5	19.4	19.8	21.1	22.8	23.5	22.5	21.4
20	22.5	21.4	20.4	19.7	19.5	19.4	20.0	21.4	23.0	23.4	22.3	21.1
25	22.4	21.2	20.3	19.7	19.4	19.5	20.2	21.6	23.2	23.1	22.1	20.8
Eom	22.2	21.2	20.2	19.7	19.4	19.5	20.5	22.0	23.3	22.9	21.9	20.6

1957

5	-20.5	-19.7	-18.8	-18.3	-17.8	-18.2	-19.2	-22.0	....	-25.3	-24.2	-22.8
10	20.4	19.5	18.6	18.1	17.8	18.3	19.6	22.5	....	25.1	24.1	22.4
15	....	19.3	18.6	18.1	17.8	18.4	20.1	22.9	....	25.1	24.0	22.3
20	....	19.1	18.5	18.1	17.9	18.6	20.6	23.3	....	24.9	23.6	22.2
25	....	19.1	18.4	18.0	17.9	18.7	21.0	23.7	....	24.7	23.4	22.0
Eom	....	19.0	18.3	17.9	18.0	18.9	21.6	24.1	....	24.5	23.1	21.7

36.23.1.9.6. Borough of Longport. Northwest end of 14th Ave. Lat  $39^{\circ}18'12''$ , long  $74^{\circ}32'10''$ . Drilled unused artesian well in Atlantic City 800-ft sand unit of Kirkwood formation, diam 6 in, depth 803 ft, length of screen 50 ft. Lsd, 5 ft above msl. MP, top of casing, 4.07 ft above lsd. Highest water level 19.0 above msl, 1895; lowest 73.4 below msl, Aug. 8, 1955. Records available: 1924-57. Affected by tidal fluctuations.

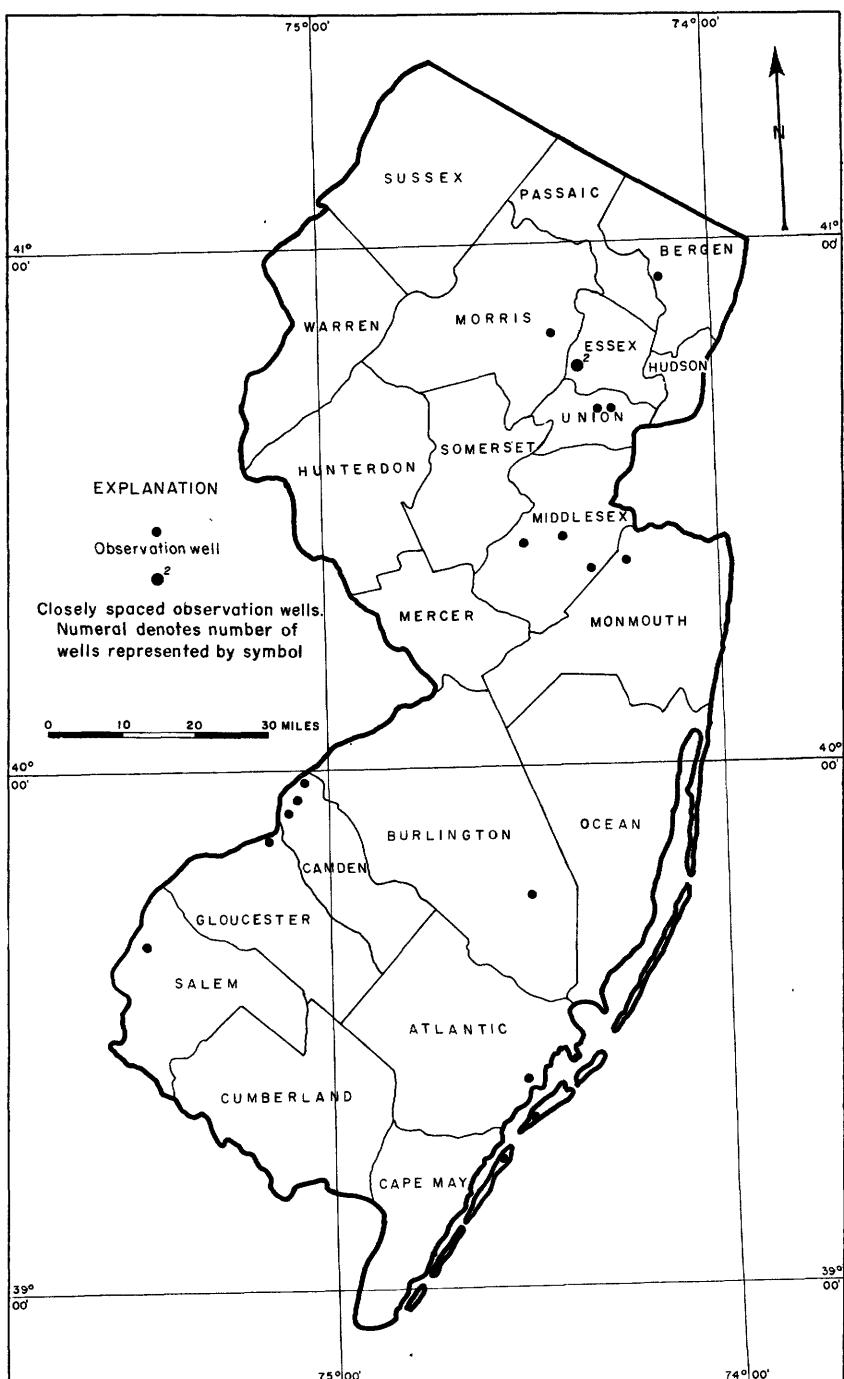


Figure 9.--Location of observation wells in New Jersey, 1956-57.

## 36.23.1.9.6--Continued.

Average water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-46.0	-44.5	-43.6	-42.6	-42.8	-45.7	-56.7	-61.7	-65.2	-55.4	-50.8	-47.1
10	44.0	43.9	43.7	42.2	43.3	46.7	55.5	....	62.8	54.7	50.8	....
15	45.2	43.9	43.0	42.2	43.2	49.9	58.1	e61.9	61.4	54.5	50.2	....
20	44.8	43.4	42.3	42.4	44.5	50.8	59.3	65.2	58.8	52.8	....	....
25	45.3	....	42.4	43.1	44.8	51.7	58.9	63.1	58.1	51.4	....	....
Eom	45.7	e43.3	42.5	43.2	45.7	54.1	60.2	64.2	55.9	51.0	47.5	45.0

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-44.1	-43.1	....	-41.0	-43.1	....	....	-70.6	....	....	-51.7	-47.0
10	42.7	42.3	....	41.1	....	-49.4	....	....	....	....	51.8	....
15	42.7	41.4	....	41.3	47.7	....	....	....	-63.7	-56.1	50.5	47.8
20	44.3	e42.1	....	41.0	....	....	....	....	61.7	55.0	49.7	46.6
25	43.8	e42.0	-42.0	41.3	....	....	....	....	....	53.7	49.1	46.9
Eom	43.3	42.0	41.5	43.4	53.6	....	-70.9	....	....	52.5	....	45.7

e Estimated.

Bergen County

26.3.1.7.3. City of Garfield. North St., East Paterson. Lat 40°54'37", long 74°07'25". Drilled unused artesian well in Brunswick shale, casing 0-30 extends 3 ft into sandstone of Triassic system, 30-353 open rock hole, diam 12 in, depth 353 ft. Lsd, 65 ft above msl. MP, top of casing, 1.63 ft above lsd. Highest water level 56.2 above msl, Mar. 8, 1926; lowest 18.1 below msl, Oct. 26-27, 1957. Records available: 1926-57. Affected by pumping.

Lowest water level above and below msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+10.9	....	....	....	....	....	....	+3.9	-7.8	-12.9	....	-8.1
10	3.0	....	....	....	....	....	....	....	3.1	10.6	....	3.7
15	+11.6	....	....	....	....	-3.3	-1.9	-7.7	10.1	12.5	-12.2	6.7
20	....	....	....	....	....	....	.7	5.8	3.5	10.8	13.6	6.7
25	....	....	....	....	....	....	....	-2.1	6.1	12.2	13.0	+4.8
Eom	....	....	....	....	....	....	+4.1	9.1	12.8	13.3	-7.5	....

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-1.2	-6.2	-3.0	+9.0	+18.7	-5.4	-7.6	-13.9	-11.2	-16.2	....	....
10	+4.2	1.6	7.8	1.6	0	6.7	8.2	15.9	14.6	16.9	....	....
15	2.6	7.9	6.5	8.8	.9	9.6	10.0	15.7	16.9	17.3	....	....
20	+2.5	6.7	4.8	3.9	+4.1	10.3	12.7	16.3	17.9	16.2	....	-17.4
25	-5.7	....	.9	9.7	-2.2	10.7	13.9	15.6	17.9	18.0	....	14.9
Eom	6.7	6.5	-5.2	6.6	3.5	7.3	13.7	12.8	14.6	18.0	....	5.1

Burlington County

32.23.6.6.8. U. S. Geol. Survey. Penn State Forest. Lat 39°44'48", long 74°28'20". Drilled observation water-table well in Cohansey sand, diam 6 in, depth 10 ft. Lsd, 79 ft above msl. MP, edge of 6-in coupling, 0.11 ft above lsd. Highest water level 78.67 above msl, Feb. 3, 1939; lowest 73.15 above msl, Sept. 7-10, 1957. Records available: 1936-57.

End-of-day water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	e+76.10e-77.56	+77.53	+77.73	+77.60	+77.64	+76.61e+77.60	+77.82e+76.79	e+77.89	+77.41	....	....	....
10	e76.47	e77.81	77.63	78.02	77.65	77.39	76.67	e77.16	77.55	e77.15	e77.72	77.59
15	e76.43	e77.95	78.05	e77.80	77.41	77.05	e76.50	e77.23	77.35	77.03	e77.54	e78.00
20	e76.95	e78.06	77.92	e77.89	77.26	e77.05	e76.36	e76.45	e77.40	77.52	e77.98	e78.15
25	e76.84	e78.00	78.12	e77.88	77.14	e77.03	e77.81	76.69	e77.33	77.53	e77.74	e78.01
Eom	e77.10	e77.85	77.93	e77.65	77.05	76.79	e77.54	e78.32	77.13	e78.12	77.57	e77.65

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	e+77.50e-78.04	+77.96	+78.14	+77.25	+76.58	+75.12e+74.00	+73.18	+73.50	+74.14e+77.10	....	....	....
10	e78.06	78.30	78.05	77.81	77.07	76.75	74.82	73.85	73.15	73.71	74.65	e78.02
15	e78.00	77.92	77.82	77.58	76.97	76.33	74.61	73.70	73.33	73.72	75.06	e77.72
20	e77.85	77.72	78.03	77.54	76.85	75.98	74.38	73.55	73.70	73.66	75.59	e77.74
25	e78.06	e77.61	77.69	77.43	76.67	75.67	74.18	e73.43	73.77	73.70	75.75	77.15
Eom	e78.16	78.43	77.64	77.51	76.61	75.43	74.01	73.30	73.66	73.81	e76.32	77.40

e Estimated.

Camden County

31.1.3.9.9. Cities Service Oil Co. Pettys Island. Lat  $39^{\circ}58'03''$ , long  $75^{\circ}06'05''$ . Drilled unused artesian well in sand of Raritan formation, diam 8 in, depth 143 ft. Lsd, 12 ft above msl. MP, top of casing, 0.35 ft above lsd. Highest water level 5.6 above msl, Dec. 8, 1950, Mar. 11, 1952; lowest 4.8 below msl, Feb. 12, 1951. Records available: 1949-57. Reflects tidal fluctuations.

Lowest water level above and below msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-0.4	-0.2	-0.6	+0.1	0.0	-0.1	0.0	-0.1	-0.3	-0.3	+0.6	-0.6
10	+.9	.2	.8	.2	-.2	...	...	.0	.3	-.6	-.1	.4
15	-.1	-.2	.4	...	+.2	-.1	...	.2	.3	.0	.6	.0
20	.2	+.1	-.0	+.2	-.2	+.6	+.2	.4	.3	+.1	.3	.4
25	.9	-.0	-.5	-.1	.4	+.5	+.1	.2	-.5	.2	.5	.0
Eom	1.6	.9	+.3	.4	.2	-.2	-.2	.2	+.2	+.5	.7	...

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-0.9	-0.6	-0.4	0.0	-0.3	-0.2	-0.4	...	-0.9	-0.3	-0.4	-1.3
10	...	+.1	1.1	-.1	.5	.1	1.0	-0.9	.6	.3	1.6	.0
15	1.0	+.3	-.5	.8	-.1	.4	.5	.7	.7	.6	.3	1.3
20	...	-.9	+.3	.2	+.4	.6	.7	.6	.5	1.3	.3	.3
25	.9	e.6	-.3	.2	-.1	.5	.9	.6	.8	.6	.7	.9
Eom	.5	.5	.7	.3	.4	.4	.6	...	.7	.3	.4	.1

e Estimated.

31.1.6.4.8. Esterbrook Pen Co. Cooper St. and Delaware Ave., Camden. Lat  $39^{\circ}56'49''$ , long  $75^{\circ}07'43''$ . Drilled unused artesian well in sand of Raritan formation, diam 6 in, depth 300 ft. Lsd, 8 ft above msl. MP, floor of building, 0.18 ft above lsd. Highest water level 3.48 above msl, Nov. 25, 1950; lowest 13.21 below msl, Feb. 4-5, 1955. Records available: 1950-57. Reflects earthquake fluctuations.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-9.67	....	-9.33	-9.56	-8.85	-9.00	....	-9.88	-11.29	-9.24	-7.59	-8.71
10	9.30	-9.74	....	9.25	....	8.72	-8.33	10.32	10.81	9.12	8.11	8.56
15	8.89	9.33	....	8.29	....	9.90	....	....	10.86	8.67	8.42	8.88
20	....	8.75	....	....	....	9.72	9.65	....	10.39	8.44	8.26	8.67
25	....	10.21	9.53	9.44	....	9.38	....	10.56	9.84	8.06	8.34	....
Eom	....	10.02	9.33	....	....	e10.37	9.83	11.15	9.28	7.66	8.54	8.77

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-9.24	-8.32	...	-8.62	-8.30	-8.10	-8.75	-9.55	-9.91	-8.94	....	-8.83
10	9.09	8.31	....	8.33	8.73	8.20	8.70	9.87	9.84	....	-9.38	....
15	8.99	8.02	-8.45	8.52	8.44	8.85	8.56	....	9.93	8.45	8.90	8.96
20	9.50	8.59	8.09	8.55	8.29	....	9.19	9.87	9.79	8.89	8.56	8.60
25	....	8.68	....	8.34	8.28	9.33	9.59	9.93	9.64	....	8.69	....
Eom	8.96	8.45	....	....	8.45	9.26	9.11	....	9.44	....	....	....

e Estimated.

31.2.2.5.2. City of Camden. Morris Station. Lat  $39^{\circ}59'20''$ , long  $75^{\circ}03'05''$ . Drilled unused artesian well in sand of Raritan formation, diam 6 in, depth 103 ft. Lsd, 6 ft above msl. MP, top of casing, 0.81 ft above lsd. Highest water level 0.3 below msl, Mar. 19, 1936; lowest 35.84 below msl, June 14, 1926. Records available: 1924-42, 1945-57. Affected by pumping in nearby well field.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-8.5	-10.3	-10.5	-10.0	-9.1	....	-10.1	-9.5	-10.0	-9.9	-8.4	-8.4
10	10.3	10.6	10.7	9.5	9.0	-5.3	10.1	9.6	9.7	10.0	8.8	8.3
15	10.4	10.6	10.2	....	8.7	10.5	10.0	9.9	10.1	9.5	9.4	8.0
20	10.3	10.2	9.9	....	8.6	10.4	10.5	10.1	10.0	9.9	8.9	7.7
25	10.9	10.5	9.7	....	6.4	....	10.2	9.9	10.0	9.5	8.4	6.9
Eom	10.8	10.5	9.8	....	6.2	10.4	10.2	10.1	9.0	9.5	8.3	7.3

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-7.8	-7.5	-6.6	....	....	....	....	....	....	....	-9.9	-11.1
10	7.8	6.3	....	....	....	....	....	....	-11.0	....	10.4	10.5
15	7.7	6.7	....	....	....	....	....	-7.4	11.2	....	10.3	10.7
20	7.6	7.0	....	....	....	....	....	7.5	11.5	....	10.2	10.3
25	7.8	6.7	....	....	....	....	....	....	....	....	10.6	10.0
Eom	7.2	6.7	....	....	....	....	....	....	....	-10.3	10.2	9.8

Cape May County

36.22.6.9.1. Mr. Schwartz. Ocean Ave. and 9th St., Ocean City. Lat  $39^{\circ}16'38''$ , long  $74^{\circ}34'30''$ . Drilled unused artesian well in Atlantic City 800-ft sand unit of Kirkwood formation, diam  $4\frac{1}{2}$  in, depth 800+ ft. Lsd, 9 ft above msl. MP, top of casing, 1.30 ft above lsd. Highest water level 19.0 below msl, Mar. 5, 1941; lowest 71.8 below msl, Aug. 6, 1955. Records available: 1928-57. Affected by tides and nearby pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-37.8	....	-35.2	-34.5	-34.7	....	-51.2	-57.4	....	....	....	-38.8
10	36.0	....	35.5	34.1	34.9	....	50.5	62.1	....	....	....	38.5
15	37.0	-35.8	35.2	33.9	34.3	....	58.8	....	....	....	....	....
20	....	....	34.1	34.4	35.0	-46.5	57.0	....	....	....	....	37.9
25	37.4	35.7	34.4	34.9	35.5	49.5	58.2	....	....	....	....	36.4
Eom	37.4	35.3	34.5	34.2	38.4	49.8	55.7	....	....	....	....	36.9

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-36.3	-35.2	....	-32.9	-34.7	-39.9	....	....	....	....	-45.0	-39.9
10	....	....	-34.0	34.0	40.1	....	....	....	....	....	45.3	....
15	36.2	....	....	33.9	40.9	....	....	....	....	....	43.9	40.7
20	....	....	....	34.0	36.9	....	....	....	....	....	42.8	39.6
25	....	....	....	33.8	....	....	....	....	....	-45.5	41.5	39.6
Eom	e36.5	33.1	....	34.3	....	....	....	....	....	45.4	....	38.4

e Estimated.

Essex County

25.15.7.5.4. (Well 30.) Commonwealth Water Co. About 0.3 mi north of Canoe Brook pumping station, 0.8 mi west of White Oak Ridge pumping station of the East Orange Water Dept. Lat  $40^{\circ}44'53''$ , long  $74^{\circ}21'20''$ . Drilled unused artesian well in Wisconsin terminal moraine, diam 10 in, depth about 130 ft. Lsd, 170 ft above msl. MP, top of casing, 4.55 ft above lsd. Highest water level 162.8 above msl, Aug. 25, 1931; lowest 97.0 above msl, Nov. 21, 1957. Records available: 1925-57. Affected by nearby pumping.

Lowest water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+106.5	+108.1	+105.9	+107.5	+105.0	+105.7	+109.1	+105.2	+103.5	+109.3	+108.1	+105.6
10	106.7	108.0	105.9	107.8	104.6	106.1	103.8	....	106.8	108.1	107.1	107.5
15	107.0	107.6	106.2	....	109.0	104.6	103.9	105.7	106.3	110.6	106.9	108.5
20	107.0	113.5	106.7	....	105.6	102.7	106.2	103.5	109.4	107.0	107.1	106.9
25	107.9	107.0	106.8	103.5	104.5	105.6	104.5	106.9	111.3	107.5	107.2	....
Eom	107.7	106.0	107.2	104.4	108.0	107.7	105.9	103.0	108.7	106.5	105.1	106.3

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+105.4	+104.6	+105.6	+107.3	+112.7	+104.8	+100.6	+97.7	....	....	....	+97.2
10	107.1	105.3	109.4	108.1	....	102.5	98.8	97.9	....	....	....	97.3
15	....	105.9	109.0	109.1	....	98.8	99.1	....	....	....	....	97.4
20	....	105.2	109.5	109.3	108.9	98.0	....	....	....	+97.3	97.4	....
25	104.5	107.9	107.2	109.1	106.6	98.7	....	....	....	97.4	97.8	....
Eom	103.9	108.1	106.4	109.4	104.7	100.0	98.6	....	....	97.5	....	....

25.15.7.5.9. East Orange Water Dept. Canoe Brook and Parsonage Hill Rd. Lat  $40^{\circ}44'50''$ , long  $74^{\circ}20'47''$ . Drilled unused artesian well in Wisconsin terminal moraine, diam 6 in, depth about 64 ft. Lsd, 182 ft above msl. MP, top of casing, 0.87 ft above lsd. Highest water level 174.80 above msl, Oct. 25, 1927; lowest 125.65 above msl, Nov. 22-23, 1957. Records available: 1925-57.

Lowest water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+139.30	+140.55	+139.40	+139.55	+135.15	+137.55	....	....	....	+146.80	+139.50	....
10	139.35	140.95	139.20	139.90	136.35	143.00	....	....	....	142.10	138.80	....
15	139.95	139.90	139.30	140.00	....	....	+135.05	+140.10	....	141.95	139.60	+138.65
20	139.40	142.65	139.85	136.45	....	....	140.60	137.70	....	138.80	137.55	136.95
25	139.65	139.60	139.95	134.05	135.75	....	135.70	139.95	....	138.00	137.25	136.95
Eom	139.40	138.75	140.00	134.60	140.10	....	136.35	136.35	....	136.45	137.40	....

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+135.00	+134.25	+135.70	+139.10	+139.10	....	+132.30	+126.40	+126.30	+129.35	+126.35	+127.45
10	137.10	135.85	138.70	140.55	132.60	....	127.50	126.30	128.95	126.60	127.75	134.95
15	136.95	135.00	137.50	140.85	134.00	+127.05	129.90	128.90	128.90	127.55	126.35	135.70
20	133.55	135.65	137.45	137.40	136.30	125.95	126.10	128.95	126.70	130.05	126.15	129.35
25	....	137.20	135.60	136.60	135.00	126.50	126.00	130.00	127.30	127.70	126.95	135.40
Eom	134.15	136.65	135.35	136.45	133.40	130.30	126.90	130.45	129.75	126.55	129.75	132.15

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Gloucester County

31. 11. 2. 7. 2. (Well 3.) The Texas Co. Eagle Point, Westville. Lat  $39^{\circ}52'30''$ , long  $75^{\circ}09'40''$ . Drilled observation artesian well in Raritan and Magothy formations, diam 8 in 0-86, 6 in 86-245, depth 298 ft, 6-in screen 225-245, cased to rock. Lsd, 22 ft above msl. MP, top of casing, 1.96 ft above lsd. Highest water level 15.7 below msl, Nov. 25, 1950; lowest 57.35 below msl, Aug. 9, 1957. Records available: 1949-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-45.1	-42.9	-47.5	-49.1	-44.2	-48.7	-48.5	-47.5	-51.5	-38.3	-35.1	-36.4
10	42.0	47.5	48.0	48.0	48.1	44.6	49.3	51.8	48.9	....	31.4	40.5
15	42.4	47.3	49.0	43.0	47.4	51.3	49.4	51.9	50.4	....	33.4	41.7
20	....	47.6	....	44.6	44.6	48.0	51.9	49.4	45.2	....	33.7	41.8
25	....	46.6	44.7	45.0	49.4	48.2	50.4	49.4	45.3	....	30.9	40.0
Eom	46.2	....	47.4	43.5	49.0	48.9	48.3	50.5	44.2	42.2	33.3	41.6

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	-46.2	-44.8	-45.9	-44.6	-41.7	-44.1	-48.8	-54.6	-51.1	-42.9	....	-41.5
10	....	42.8	43.0	45.2	43.0	50.2	55.2	48.2	42.2	-38.6	45.4	....
15	43.5	49.8	45.6	39.9	45.1	....	50.1	52.1	47.1	45.7	....	46.7
20	....	44.6	37.8	40.4	e50.6	e52.6	50.1	50.9	42.4	39.7	47.9	....
25	46.3	49.3	42.0	39.7	45.8	44.5	52.1	46.8	50.8	49.9	37.7	44.8
Eom	46.0	49.3	41.0	40.1	e44.0	e43.0	49.1	....	40.9	50.5	36.2	43.5

e Estimated.

Middlesex County

28. 4. 4. 2. 1. Robert D. Fischer. Lat  $40^{\circ}25'50''$ , long  $74^{\circ}27'17''$ . Dug observation water-table well in Farrington sand member of Raritan formation, diam  $4\frac{1}{2}$  ft, depth 17 ft, cased with concrete blocks. Lsd, 73 ft above msl. MP, angle iron, bottom of doors of shelter, 1.70 ft above lsd. Highest water level 64.12 above msl, Apr. 26-27, 1939; dry at 56.08 above msl, Nov 3-Dec. 31, 1957. Records available: 1936-57.

End-of-day water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+58.07	+57.69	+58.25	+59.45	+60.24	....	+59.35	+58.67	+57.97	....	+56.92	+56.71
10	58.02	57.73	58.36	59.66	60.20	+59.82	59.25	58.56	57.85	....	56.87	56.70
15	57.95	57.78	58.57	60.00	60.21	59.76	59.14	58.45	57.76	....	56.83	56.78
20	57.87	57.88	58.78	60.15	60.13	59.68	59.01	58.33	57.67	....	56.80	56.83
25	57.80	58.06	58.99	60.23	60.03	59.58	58.92	58.20	57.57	....	56.77	56.99
Eom	57.73	58.14	59.26	60.24	60.00	59.48	58.78	58.08	57.47	....	56.73	57.11

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+57.16	+57.23	+57.38	+57.83	+58.71	+58.51	+57.95	+57.27	+56.62	+56.17	+56.08	(f)
10	57.20	57.25	57.41	58.04	58.75	58.44	57.83	57.16	56.54	56.14	(f)	(f)
15	57.21	57.24	57.46	58.24	58.75	58.34	57.73	57.06	56.46	56.12	(f)	(f)
20	57.20	57.26	57.56	58.45	58.72	....	57.63	56.95	56.38	56.12	(f)	(f)
25	57.25	57.28	57.62	58.56	58.64	....	57.51	56.85	56.30	56.12	(f)	(f)
Eom	57.23	57.35	57.68	58.65	58.56	....	57.37	56.72	56.22	56.10	(f)	(f)

f Dry.

28. 5. 4. 8. 1. (Well 1.) Duernal Water System. About  $\frac{1}{4}$  mi east of traffic circle on Rt. 18 near Old Bridge. Lat  $40^{\circ}24'32''$ , long  $74^{\circ}21'07''$ . Drilled observation water-table well in Old Bridge sand member of Raritan formation, diam 6 in, depth 67 ft. Lsd, 18.7 ft above msl. MP, top of casing, 1.50 ft above lsd. Highest water level 7.67 above msl, July 31, 1945; lowest 2.35 above msl, Sept. 11, 1954. Records available: 1938-57.

End-of-day water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+4.60	....	....	....	+5.97	....	....	....	....	....	+4.67	+4.40
10	....	....	....	+6.45	....	....	+5.50	....	....	....	4.53	4.35
15	....	....	....	....	5.93	+5.49	5.43	....	+4.73	....	....	4.51
20	....	....	....	6.48	5.81	....	5.35	....	....	....	4.41	....
25	4.44	....	....	6.34	5.74	....	5.34	....	....	....	4.38	4.87
Eom	4.40	....	....	6.17	5.66	5.63	....	....	....	+4.48	4.44	....

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	....	+4.89	+5.21	+5.54	+5.08	+4.60	+4.12	+3.88	+3.73	+3.77	+3.79
10	....	....	4.90	5.35	5.38	5.02	4.52	4.07	3.86	3.91	3.68	4.02
15	....	+4.87	5.01	5.61	5.44	4.93	4.44	4.00	3.80	3.73	3.68	4.13
20	....	4.78	5.15	5.69	5.36	4.81	4.33	3.92	3.79	3.69	3.75	4.34
25	....	4.73	5.13	5.66	5.27	4.72	4.25	3.98	3.84	3.75	3.70	4.61
Eom	....	4.87	5.13	5.62	5.18	4.72	4.21	4.02	3.74	3.66	3.71	4.92

29. 11. 1. 2. 3. Joseph Morrell. Near Moerls Corner. Lat  $40^{\circ}21'54''$ , long  $74^{\circ}18'39''$ . Dug observation water-table well in Englishtown sand, diam 17 in, depth 9 ft, cased with precast concrete rings. Lsd, 76 ft above msl. MP, inner edge of concrete ring, 0.95 ft above lsd. Highest water level 75.08 above msl, Mar. 28, 1932; lowest 66.44 above msl, Oct. 6, 1957. Records available: 1923-57.

End-of-day water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+73.27	e74.25	e73.50	+73.85	+73.68	+73.74	-72.20	+71.73	+72.28	+72.69	+73.89	+73.68
10	74.13	e73.80	e73.75	74.27	73.88	73.22	71.95	71.80	72.82	72.61	73.67	73.87
15	74.01	e73.75	e74.27	73.96	73.54	72.42	72.36	71.39	72.37	72.55	73.54	74.60
20	73.73	e74.40	e74.47	73.76	73.25	73.16	71.94	71.12	72.72	72.62	74.01	73.97
25	73.60	e74.00	74.29	73.61	72.99	73.19	e72.64	71.60	72.73	72.63	74.55	74.10
Eom	74.08	e74.14	74.11	73.65	73.37	72.30	e72.15	71.41	72.90	e73.68	73.91	73.84
							1957					
5	+73.68	+74.21	+74.02	+74.60	+73.38	+72.14	+69.90	+68.24	+67.12	+66.46	+67.58	+72.00
10	73.88	74.38	74.17	74.02	73.07	71.82	69.58	67.96	e66.89	66.67	67.98	e72.90
15	73.57	73.92	74.11	73.71	73.89	71.39	69.33	67.73	66.79	66.71	68.44	e73.25
20	73.40	73.72	74.06	74.02	73.23	70.87	69.00	e67.57	66.69	66.81	66.88	e73.20
25	74.04	73.62	73.74	73.76	72.70	70.50	68.72	67.40	66.61	66.97	e69.26	e73.20
Eom	73.94	74.06	73.68	73.58	72.45	70.27	68.47	e67.30	66.52	67.16	e69.67	e73.80

e Estimated.

### Monmouth County

29. 11. 1. 2. 9. Walter Novak. Hillsboro Rd., about  $\frac{1}{2}$  mi southeast of Moerls Corner. Lat  $40^{\circ}21'20''$ , long  $74^{\circ}18'40''$ . Dug observation water-table well in Englishtown sand, diam  $4\frac{1}{2}$  ft, depth 21 ft, cased with concrete well blocks. Lsd, 113 ft above msl. MP, inside edge of door frame, 2.84 ft above lsd. Highest water level 100.40 above msl, Apr. 19, 1939; lowest 95.18 above msl, Oct. 30-Nov. 1, 1957. Records available: 1936-57.

End-of-day water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+96.47	+96.40	+97.49	+98.87	+99.29	+99.00	+98.43	+97.83	+97.16	+96.78	+96.64	+96.53
10	96.42	96.62	97.61	99.10	99.28	98.89	98.28	97.73	97.19	96.71	96.60	96.49
15	96.45	96.78	97.78	99.30	99.21	98.76	98.17	97.63	97.11	96.63	96.52	96.57
20	96.44	96.94	97.99	99.38	99.10	98.68	98.05	97.51	97.03	96.58	96.53	96.81
25	96.40	97.16	98.31	99.41	98.99	98.59	98.04	97.42	96.95	96.55	96.57	96.95
Eom	96.36	97.30	98.68	99.39	98.95	98.47	97.90	97.28	96.90	96.51	96.58	97.04
							1957					
5	+97.03	+97.04	+97.30	+97.78	+98.49	+97.91	+97.16	+96.44	+95.88	+95.44	+95.23	+95.25
10	97.01	97.12	97.38	98.01	98.44	97.80	97.04	96.33	95.82	95.38	95.32	95.43
15	97.00	97.18	97.46	98.18	98.35	97.68	96.93	96.23	95.73	95.32	95.32	95.81
20	96.93	97.20	97.55	98.34	98.23	97.56	96.82	96.13	95.67	95.28	95.33	95.95
25	97.00	97.22	97.61	98.43	98.13	97.43	96.70	96.07	95.60	95.23	95.30	96.01
Eom	97.03	97.25	97.64	98.49	98.01	97.28	96.57	95.95	95.53	95.18	95.28	96.17

### Morris County

25. 14. 3. 5. 5. (Whippany well.) Jersey Central Power & Light Co. About 3 mi east of Whippany at power plant. Lat  $40^{\circ}49'00''$ , long  $74^{\circ}23'00''$ . Drilled observation artesian well in Wisconsin glacial outwash, diam 6 in, depth 170 ft. Lsd, 190 ft above msl. MP, top of casing, 2.45 ft above lsd. Highest water level 177.94 above msl, June 3, 1952; lowest 170.10 above msl, Jan. 3, 1956. Records available: 1951-57.

Lowest water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	+175.71	+175.98	+176.28	+176.35	.....	.....	+176.07	.....	.....	.....	.....
10	+175.60	175.73	175.92	176.32	176.31	.....	.....	.....	+175.96	+175.78	.....	+175.83
15	.....	175.80	176.07	176.44	176.42	+175.92	.....	175.77	175.90	.....	.....	175.97
20	.....	175.85	.....	176.34	176.47	176.07	.....	175.67	175.84	.....	.....	175.98
25	.....	.....	176.15	176.34	.....	176.08	.....	.....	175.80	.....	.....	175.93
Eom	175.60	175.88	.....	176.38	.....	176.06	+176.08	.....	175.81	.....	.....	176.02
							1957					
5	+176.02	+175.72	+176.28	+176.38	+176.52	+176.44	.....	.....	.....	+175.17	+174.99	+174.73
10	175.83	175.92	176.08	176.48	176.50	176.38	175.84	+175.72	+175.48	175.17	174.93	175.03
15	175.78	176.00	176.13	176.44	176.58	176.32	175.72	175.59	175.46	175.18	175.00	175.01
20	.....	176.00	176.23	176.60	176.50	176.03	175.89	175.53	175.33	175.11	174.99	174.78
25	176.02	176.06	176.19	176.56	176.46	175.92	.....	.....	175.37	174.91	.....	175.03
Eom	175.98	176.20	176.16	176.56	176.50	176.10	175.74	175.58	175.28	175.08	174.98	175.20

Salem County

30.32.2.3.3. (Penns Grove 41.) State of New Jersey. Lat  $39^{\circ}41'49''$ , long  $75^{\circ}28'06''$ . Drilled observation water-table well in Cape May formation, diam 6 in, depth 25 ft,  $5\frac{1}{2}$  in screen, 25/1,000, slotted 20-25. Lsd, 10 ft above msl. MP, top of casing, 2.37 ft above lsd. Highest water level 11.89 above msl, Feb. 4, 1952; lowest 4.66 above msl, Oct. 15, 1943. Records available: 1941-57.

End-of-day water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+7.29	+9.02	.....	+10.51	+10.25	+8.72	+7.71	+8.69	+7.51	+7.25	+10.72	+10.07
10	7.33	9.51	.....	10.95	9.98	8.55	7.68	8.40	7.97	7.18	10.39	10.05
15	7.65	9.72	+10.96	10.73	9.78	8.41	7.45	8.14	7.69	7.00	10.12	11.08
20	7.67	10.38	11.01	10.49	9.35	8.21	7.26	7.80	7.40	7.11	10.66	11.00
25	....	10.37	10.92	10.25	9.00	8.10	8.42	8.00	7.36	8.48	10.61	11.16
Eom	8.23	.....	10.67	10.18	8.76	7.81	8.79	7.68	7.38	8.80	10.30	10.75

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+10.45	+10.83	+10.93	+11.35	+9.81	+8.61	+7.25	+6.10	+5.45	+6.80	+7.15	.....
10	10.76	11.27	10.94	11.00	9.49	8.69	7.08	5.97	6.04	6.78	7.20	+9.49
15	10.56	10.83	10.89	10.59	9.20	8.32	6.84	5.83	6.93	6.58	7.30	9.50
20	....	10.56	11.02	10.48	9.20	8.04	6.64	....	7.21	6.70	7.50	9.70
25	....	10.41	10.62	10.28	8.90	7.73	6.45	....	7.24	6.96	7.55	9.78
Eom	....	10.99	10.45	10.27	8.82	7.50	6.25	....	7.03	6.90	....	9.60

Union County

26.21.5.4.6. Union County Park Comm. Galloping Hill Golf Course near Kenilworth. Lat  $40^{\circ}41'03''$ , long  $74^{\circ}17'26''$ . Drilled unused artesian well in Brunswick shale, diam 6 in, depth 290 ft. Lsd, 69 ft above msl. MP, top of casing, 1.65 ft above lsd. Highest water level 65.94 above msl, June 2, 1952; lowest 58.99 above msl, Aug. 4, 1955. Records available: 1943-57.

End-of-day water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+60.31	+60.56	+60.92	+62.09	-61.70	+61.02	+61.75	+61.08	+60.17	+60.37	+61.99	+62.00
10	60.23	60.17	61.28	61.96	61.23	60.39	61.54	60.47	60.47	61.16	e61.80	62.04
15	60.84	60.30	60.91	62.69	61.41	60.39	61.58	60.35	60.52	61.52	61.71	62.53
20	59.97	60.81	61.88	61.60	61.59	60.31	60.75	60.35	60.38	61.48	62.00	62.30
25	59.94	61.07	e62.09	61.50	60.82	60.52	61.11	60.46	60.52	61.50	62.58	63.28
Eom	60.05	60.75	e62.05	61.74	61.10	60.95	60.88	60.14	60.70	61.67	62.12	e62.50

1957													
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
5	e62.60	e62.32	e62.69	+63.46	+63.54	+62.47	+62.29	+60.58	+60.36	+60.32	+60.25	+60.48	
10	e62.35	e62.73	e63.14	e63.24	62.28	62.68	61.87	61.98	60.39	60.43	60.25	60.58	61.17
15	62.36	62.42	62.64	63.28	62.02	60.80	61.79	60.14	60.88	60.36	60.13	60.72	
20	62.52	62.48	62.71	63.24	62.88	60.16	60.71	60.54	60.33	60.59	60.10	60.17	
25	62.14	62.70	62.99	63.04	62.69	60.67	60.00	60.63	60.35	60.10	60.20	61.17	
Eom	62.10	62.48	63.11	63.25	62.70	62.12	60.41	60.67	60.69	60.11	60.84	61.33	

e Estimated.

26.21.5.8.3. (Well 3.) White Laboratories, Inc. Kenilworth. Lat  $40^{\circ}40'28''$ , long  $74^{\circ}16'40''$ . Drilled observation artesian well in Brunswick shale, diam 6 in, depth 400 ft. Lsd, 81 ft above msl. MP, top of casing, 1.26 ft above lsd. Highest water level 72.5 above msl, Apr. 20, 1953; lowest 39.1 above msl, Mar. 7, 1952. Records available: 1952-57.

Lowest water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+64.4	+64.1	+65.4	+66.5	+65.8	+64.7	+62.6	+62.2	+59.9	....	+60.0	+61.0
10	64.4	64.1	66.0	67.8	66.1	66.1	59.6	60.7	+60.1	60.6	61.5	....
15	....	64.6	66.2	68.2	64.8	61.5	....	59.1	60.3	59.7	60.3	61.9
20	64.2	65.4	....	67.6	66.1	63.5	....	60.2	....	....	61.5	....
25	63.9	65.6	67.5	67.2	65.6	61.9	60.8	61.2	60.3	....	....	62.9
Eom	63.8	65.3	67.4	64.1	64.1	62.0	61.3	59.2	60.1	59.6	61.7	62.8

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+62.7	+62.5	+63.5	+63.8	+64.8	+61.9	....	+59.9	+57.2	+57.9	+57.4	....
10	62.5	62.9	63.8	64.0	62.6	61.1	....	58.2	56.9	57.9	57.9	+58.6
15	62.5	63.0	63.2	....	62.9	....	....	58.1	56.9	57.8	57.3	....
20	62.3	63.0	63.9	62.9	62.7	....	....	57.6	56.8	....	57.5	57.3
25	62.3	62.2	63.1	63.0	62.0	60.6	....	57.8	56.9	57.5	58.0	....
Eom	62.3	62.6	63.5	64.9	61.9	....	+58.8	57.5	57.8	57.3	....	....

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## NEW YORK

By J. A. Ziarno, L. R. Wistoft, and R. L. Barnell

The observation-well program in New York was continued in 1956 and 1957 in cooperation with the State Water Power and Control Commission, the Nassau County Department of Public Works, the Suffolk County Board of Supervisors, and the Suffolk County Water Authority. Figure 10 shows the location of observation wells included in this report.

### Well-Numbering System

Wells are designated by letters indicating the county name and by serial numbers.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum except in Long Island where they are referred to mean sea level (Sandy Hook datum). Measurements between plus signs are above mean sea level, and those between minus signs are below mean sea level.

### UPSTATE

#### Broome County

Bm 121. U. S. Geol. Survey. Camden and Main Sts., Johnson City. Lat  $42^{\circ}06'57''$ , long  $75^{\circ}58'35''$ . Drilled observation water-table well (previously reported as artesian well) in glacial sand of Pleistocene age, diam 6 in, depth 51 ft, cased to 51, open end. Lsd, about 835 ft above msl. MP, top of casing, 3.17 ft above lsd. Highest water level 9.73 below lsd, Apr. 8, 1956; lowest 31.71 below lsd, Nov. 17-18, 1957. Records available: 1947-57. Water level affected by floods of Susquehanna River.

Day	Highest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	24.55	25.87	23.95	18.77	19.55	24.2	27.4	27.2	28.1	27.7	24.8	27.4
10	25.01	26.02	12.94	10.10	20.60	24.5	27.3	27.5	28.1	28.3	25.5	27.7
15	24.83	25.56	14.45	13.89	.....	25.0	27.4	27.9	28.0	28.7	26.8	27.4
20	24.40	25.20	17.34	.....	.....	25.6	27.5	28.4	27.6	28.7	27.6	25.5
25	24.72	24.99	19.78	16.60	23.42	26.4	27.1	28.6	27.0	28.1	27.8	.....
Eom	25.42	24.38	21.44	18.70	24.3	27.0	26.9	28.5	27.0	25.5	27.2	23.2

1957

5	23.4	24.5	26.0	26.2	24.7	24.4	26.2	26.2	30.4	30.9	31.5	30.3
10	24.3	25.3	26.2	22.4	25.3	25.7	25.4	27.2	30.6	31.0	31.6	30.5
15	e25.3	25.7	26.3	21.9	26.0	26.9	25.7	28.1	30.9	e31.2	31.6	30.6
20	e25.9	26.4	....	22.3	26.5	27.6	25.5	29.0	31.1	31.4	31.5	30.9
25	24.7	27.0	e25.7	22.8	25.1	28.2	25.8	29.8	31.2	31.4	31.3	28.3
Eom	23.7	26.9	25.9	23.8	24.7	28.1	26.0	30.3	31.0	31.4	30.9	26.1

e Estimated.

#### Cattaraugus County

Ct 121. State Dept. of Conservation. Near Red House. Lat  $42^{\circ}05'38''$ , long  $78^{\circ}44'52''$ . Drilled unused artesian well in sand and gravel, diam 6 in, depth 53 ft (previously reported as 59 ft), cased to 53, open end. Lsd, about 1,455 ft above msl. MP, top of casing, 0.30 ft above lsd. Highest water level 3.35 below lsd, May 3, 1957; lowest 12.89 below lsd, Sept. 30, 1955. Records available: 1950-57.

## Ct 121--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 28, 1956	7.24	Nov. 9, 1956	7.91	Mar. 22, 1957	5.50	July 26, 1957	8.80
July 6	7.90	16	8.42	29	5.3	Aug. 2	9.18
13	7.86	23	8.00	Apr. 5	4.80	9	9.40
20	7.50	30	7.60	12	4.46	16	10.05
27	7.22	Dec. 7	7.14	19	3.96	23	10.60
Aug. 3	7.34	14	6.71	26	3.85	30	10.89
10	6.90	21	6.30	May 3	3.35	Sept. 6	11.01
17	6.45	28	6.15	10	3.61	13	11.07
24	6.30	Jan. 4, 1957	6.06	17	3.73	20	11.17
31	6.01	11	6.05	18	3.54	27	11.43
Sept. 7	5.86	18	6.07	24	4.01	Oct. 4	12.07
14	5.51	25	6.10	31	5.00	11	12.11
21	5.34	Feb. 1	6.09	June 7	5.74	18	12.05
28	5.46	8	6.10	14	6.10	25	12.30
Oct. 5	5.51	15	6.07	21	6.50	Nov. 29	12.10
12	5.70	22	6.00	28	7.21	Dec. 6	11.00
19	6.17	Mar. 1	5.81	July 5	7.50	13	10.56
26	7.11	8	5.90	12	7.77	20	10.01
Nov. 2	7.70	15	5.64	19	8.21	27	9.60

Chautauqua County

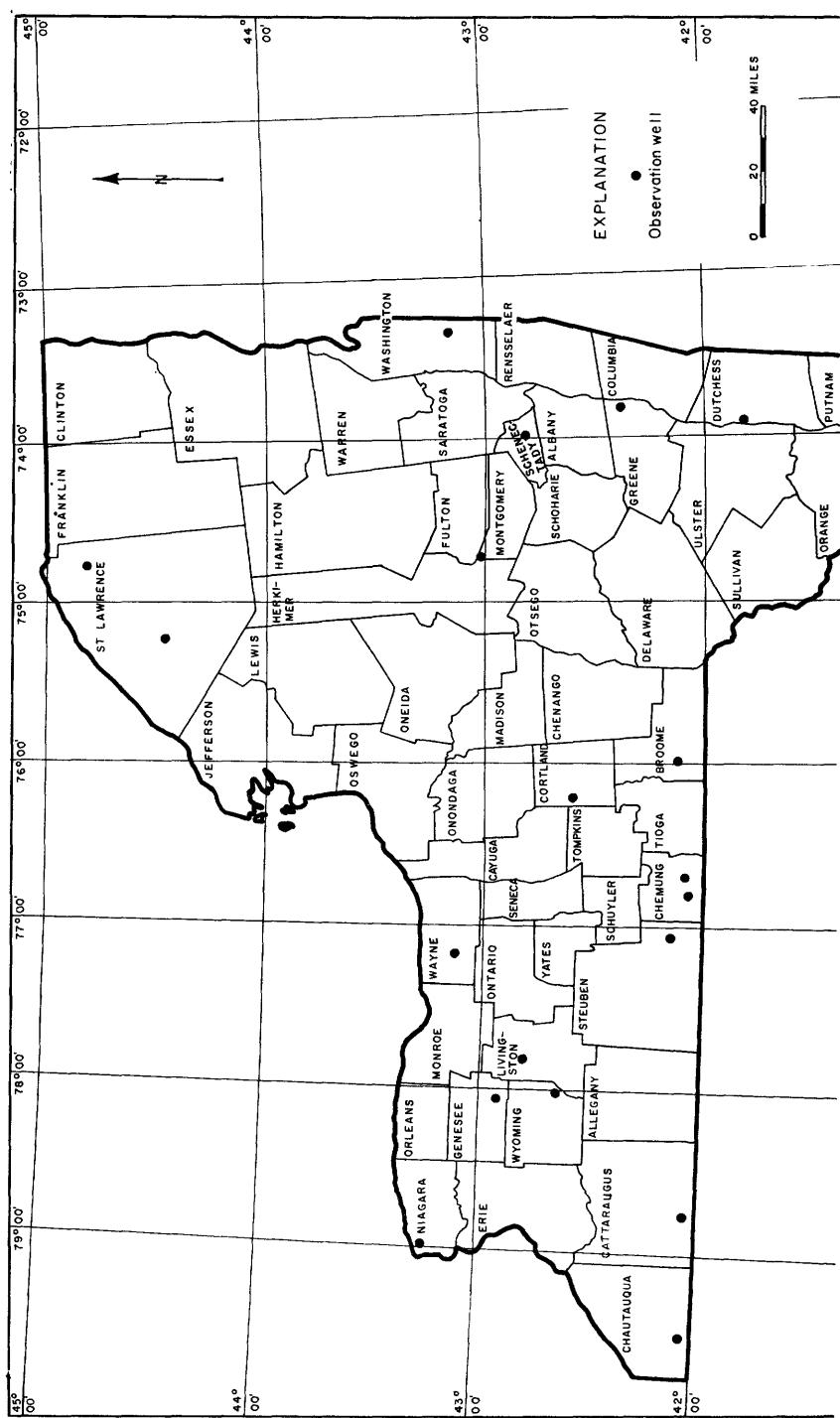
Cu 5. State Dept. of Conservation. Near Panama. Lat 42°03'28", long 79°29'59". Dug unused water-table well in glacial till of Pleistocene age, diam 36 in, depth 33 ft. Lsd, about 1,770 ft above msl. MP, arrow painted on top edge of rock slab over south side of well, 0.05 ft above lsd. Highest water level 1.61 below lsd, Jan. 26, 1952; lowest 9.41 below lsd, May 24, 1949. Records available: 1949-57.

Jan. 14, 1956	2.81	July 14, 1956	2.22	Jan. 5, 1957	2.21	July 13, 1957	3.11
21	2.83	21	2.34	12	2.22	20	3.87
28	2.77	28	2.30	19	2.29	27	4.31
Feb. 11	2.69	Aug. 4	2.46	26	2.16	Aug. 3	4.63
18	2.54	11	2.70	Feb. 2	2.09	10	4.87
25	2.48	18	2.92	9	1.98	17	5.05
Mar. 3	2.46	25	2.71	16	2.05	24	5.42
10	2.39	Sept. 1	2.31	23	2.12	31	5.79
17	2.68	8	2.26	Mar. 2	2.16	Sept. 7	5.85
24	2.53	15	2.34	9	2.23	14	6.13
31	2.35	22	2.36	16	2.27	21	6.29
Apr. 7	2.33	29	2.59	23	2.36	28	6.50
14	2.38	Oct. 6	2.92	30	2.39	Oct. 5	6.58
21	2.30	13	3.37	Apr. 6	2.33	12	6.71
26	2.35	20	3.64	13	2.35	19	6.98
May 5	2.66	27	3.89	20	2.35	26	7.18
12	2.83	Nov. 3	4.22	27	2.26	Nov. 2	6.89
19	2.92	10	4.29	May 18	3.59	9	6.67
26	3.09	17	4.41	25	3.31	16	5.39
June 2	3.23	24	4.09	June 1	3.69	23	5.11
9	3.41	Dec. 1	3.63	8	4.09	30	4.87
23	3.17	8	3.01	15	4.43	Dec. 7	3.73
27	3.29	15	2.35	22	4.72	14	2.59
30	2.35	22	2.34	29	2.09	21	2.55
July 9	2.36	29	2.19	July 6	2.52	28	2.47

Chemung County

Cm 83. Wallace Dailey. Near Lowman. Lat 42°04'43", long 76°41'01". Dug garden water-table well in glacial till of Pleistocene age, diam 30 in, depth 21 ft, stone-lined. Lsd, about 1,480 ft above msl. MP, top edge of wooden cover at 1 $\frac{1}{4}$ -in hole, at lsd. Highest water level 2.30 below lsd, Mar. 26, 1955; lowest 12.93 below lsd, Oct. 23, 1954. Records available: 1946-57. Usually less than 10 gpd pumped when used.

Jan. 7, 1956	5.9	Mar. 3, 1956	3.48	Apr. 28, 1956	3.04	June 23, 1956	6.9
14	6.25	10	3.25	May 5	2.9	29	7.73
21	6.60	17	3.29	12	2.70	30	7.84
28	7.30	24	3.27	19	3.23	July 7	8.55
Feb. 4	7.9	31	3.17	26	4.54	14	8.80
11	7.70	Apr. 9	2.70	June 2	4.9	21	7.68
18	6.16	14	2.80	9	4.9	28	3.68
25	4.50	21	3.09	16	5.9	Aug. 4	5.28



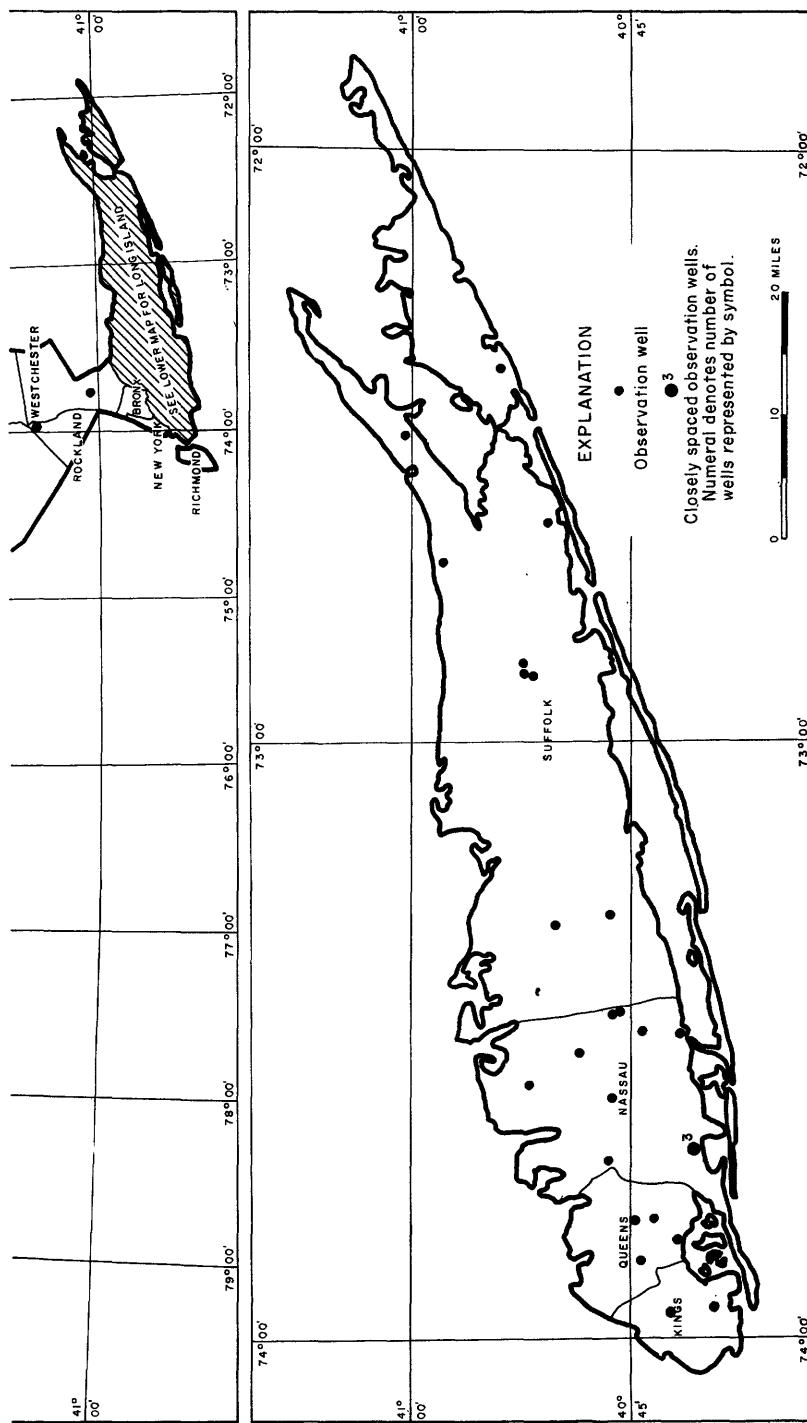


Figure 10. --Location of observation wells in New York, 1956-57.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

## Cm 83--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 11, 1956	6.30	Dec. 22, 1956	2.85	Apr. 20, 1957	2.56	Aug. 10, 1957	10.95
Sept. 3	5.55	Jan. 5, 1957	3.18	May 11	4.88	17	11.23
8	5.60	12	3.60	16	5.20	24	11.45
15	6.30	19	4.32	18	5.16	Oct. 5	11.5
22	5.9	26	3.27	25	3.17	12	11.65
29	4.25	Feb. 2	3.85	June 1	4.57	19	11.69
Oct. 6	5.05	9	3.74	8	5.72	26	11.79
20	6.15	16	3.67	15	6.80	Nov. 2	11.90
27	6.47	23	4.55	22	7.90	9	12.05
Nov. 3	6.10	Mar. 2	4.02	29	8.76	16	12.10
10	5.9	9	3.45	July 6	9.06	23	12.21
17	4.64	16	2.9	13	9.42	30	12.26
26	4.69	23	2.9	20	9.90	Dec. 7	12.38
Dec. 1	4.80	30	2.72	27	10.40	14	12.37
8	3.22	Apr. 6	2.48	Aug. 3	10.89	21	12.48
15	2.9	13	2.68				

Cm 84. Remington Rand, Inc., South Main St., Elmira. Lat 42°04'17", long 76°47'47". Drilled unused artesian (?) well in glacial outwash of Pleistocene age, diam 8 in (previously reported as 6 in), depth 257 ft. Lsd, about 850 ft above msl. MP, top south edge of metal plate, at lsd. Highest water level 15.18 below lsd, Apr. 16, 1956; lowest 20.93 below lsd, Nov. 1, 1954. Records available: 1947-57. Water level affected by nearby industrial pumping.

Jan.	2, 1956	16.46	July 2, 1956	16.85	Jan. 7, 1957	16.16	July 1, 1957	16.66
	9	16.44	9	16.78	14	16.26	8	16.88
	16	16.56	16	16.81	21	16.42	15	17.05
	23	16.63	23	16.69	28	16.20	22	17.22
	30	16.68	Aug. 13	16.93	Feb. 4	16.24	29	17.31
Feb. 6	16.74	20	17.00		11	16.28	Aug. 19	18.05
13	16.42	27	17.20		18	16.32	26	18.74
20	16.30	Sept. 3	17.06		25	16.48	Sept. 2	19.22
27	16.27	10	16.95		Mar. 4	16.35	9	19.38
Mar. 5	16.05	17	16.85		11	16.30	16	19.52
12	15.70	24	16.78		18	16.10	23	19.81
19	15.44	30	16.80		25	16.03	30	20.00
26	15.60	Oct. 1	16.82		Apr. 1	16.09	Oct. 7	20.11
Apr. 2	15.70	8	16.78		8	15.80	14	20.05
9	15.36	15	16.84		15	15.42	21	19.97
16	15.18	22	16.86		22	15.58	28	19.90
23	15.35	29	16.87		29	15.63	Nov. 4	19.91
30	15.65	Nov. 5	16.74		May 6	15.82	11	19.82
May 7	15.78	12	16.66		13	16.04	18	19.76
14	15.85	19	16.70		16	16.12	24	19.50
21	15.96	26	16.65		20	16.00	Dec. 2	19.22
28	16.16	Dec. 3	16.69		27	15.88	9	18.80
June 4	16.33	10	16.43		June 3	16.00	16	18.95
11	16.44	17	16.39		10	16.30	23	18.32
18	16.63	24	16.23		17	16.45	30	18.12
25	16.72	31	16.11		24	16.64		

## Cortland County

C 19. City of Cortland, Broadway, Cortland. Lat 42°35'45", long 76°11'45". Dug unused water-table well in glacial gravel of Pleistocene age, diam 6 in, depth 13 ft, cased to 13, open end. Lsd, about 1,150 ft above msl. MP, top inner step of flange (since Nov. 24, 1956), 2.45 ft below lsd. Highest water level 2.98 below lsd, Apr. 5, 1947; lowest 8.11 below lsd, Oct. 8, 1955. Records available: 1947-57. Water level may be affected by pumping from nearby municipal supply wells and by nearby stream stage.

Jan.	7, 1956	4.63	Mar. 31, 1956	4.02	June 22, 1956	14.75	Sept. 15, 1956	6.13
	14	4.62	Apr. 7	3.03	29	4.80	22	5.87
	21	4.65	14	3.56	July 7	4.81	29	5.91
	29	4.73	21	3.83	14	4.85	Oct. 6	5.88
Feb. 4	4.80	28	4.05		21	5.00	13	5.90
11	4.81	May 5	4.16		28	5.07	20	6.09
18	4.75	12	4.72		Aug. 4	5.31	27	6.17
25	4.72	19	4.74		11	5.51	Nov. 3	6.29
Mar. 3	4.49	26	4.46		18	5.76	10	6.26
10	3.27	31	4.40		25	5.83	24	6.46
17	3.74	June 8	j4.55		Sept. 1	6.03	Dec. 1	6.48
24	3.86	15	j4.68		8	6.08	8	6.44

## C 19--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 15, 1956	6.22	Mar. 23, 1957	4.34	June 15, 1957	4.92	Oct. 12, 1957	6.01
22	5.75	30	4.45	22	5.35	19	6.21
29	4.99	Apr. 6	4.35	29	5.07	26	6.30
Jan. 5, 1957	4.81	13	4.30	July 6	5.03	Nov. 2	6.35
12	4.80	20	4.39	13	5.07	9	6.62
19	4.76	27	4.61	20	5.27	16	6.60
26	4.52	May 4	4.65	27	5.32	23	6.67
Feb. 2	4.59	11	4.81	Sept. 7	5.97	30	6.70
9	4.67	15	4.85	14	5.99	Dec. 7	6.72
16	4.65	18	4.91	21	5.91	14	6.67
23	4.74	25	4.69	28	5.95	21	6.54
Mar. 2	4.50	June 1	4.76	Oct. 5	5.97	28	5.57
16	4.31	8	4.91				

j Daily highest water level from recorder graph.

Dutchess County

Du 321. U. S. National Park Service. Near Hyde Park. Lat  $41^{\circ}47'38''$ , long  $73^{\circ}56'33''$ . Drilled unused artesian well, diam 6 in, depth 128 ft. Lsd, about 170 ft above msl. MP, top of casing, 3.10 ft above lsd. Highest water level 65.82 below lsd, June 22, 1953; lowest 71.44 below lsd, Nov. 12, 1957. Records available: 1948-50, 1953-57.

Highest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	68.14	67.94	.....	66.80	66.78	67.56	67.90	68.56	68.76	69.08	69.36
10	.....	68.09	67.86	.....	66.72	66.84	67.47	67.99	68.63	68.85	69.06	69.30
15	67.93	68.00	67.85	.....	66.57	67.08	67.48	68.08	68.58	68.97	69.20	69.26
20	68.09	67.88	67.83	.....	66.69	67.27	67.72	68.21	68.58	69.03	69.26	69.17
25	68.11	67.82	67.74	.....	66.72	67.20	67.66	68.37	68.66	69.00	69.24	68.95
Eom	68.14	67.88	67.69	.....	66.69	67.43	67.80	68.46	68.78	69.08	69.16	69.00
1957												
5	69.25	69.42	69.45	.....	69.26	69.44	69.79	70.20	70.66	71.14	71.17	71.25
10	69.19	69.28	69.28	69.13	69.32	69.52	69.95	70.34	70.91	71.07	71.23	71.11
15	69.34	69.41	69.53	69.23	69.30	69.54	70.00	70.45	70.88	71.22	71.16	71.29
20	69.50	69.42	69.38	69.23	69.31	69.58	70.14	70.55	70.96	71.07	71.11	71.10
25	69.31	69.55	69.46	69.25	69.32	69.69	70.18	70.60	70.97	71.07	71.21	71.07
Eom	69.31	69.40	69.51	69.19	69.48	69.57	70.13	70.71	71.09	71.23	71.15	70.94

Genesee County

Gs 2. Paul Rigoni. Near Pavilion. Lat  $42^{\circ}55'16''$ , long  $78^{\circ}03'17''$ . Dug unused water-table well in glacial till of Pleistocene age, diam 36 in, depth 21 ft, stone-lined. Lsd, about 1,045 ft above msl. MP, painted arrow on top edge of 2 x 4 inside tape gage opening, 0.57 ft above lsd. Highest water level 0.42 below lsd, Feb. 25, 1956; lowest 5.25 below lsd, Sept. 24, 1955. Records available: 1950-57. Water overflows top of stone curbing when level rises to approximately 0.5 ft below lsd.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7, 1956	1.76	May 26, 1956	1.51	Oct. 5, 1956	1.59	Feb. 23, 1957	1.50
14	1.16	June 2	1.7	13	1.84	Mar. 2	1.02
21	1.73	9	1.89	20	1.97	9	.89
28	1.99	16	2.16	27	2.15	16	.82
Feb. 4	1.67	23	2.31	Nov. 3	2.24	23	1.07
11	.72	26	2.29	10	2.35	30	1.20
18	.61	July 1	2.48	19	2.53	Apr. 6	.55
25	.42	7	2.59	25	1.15	14	.77
Mar. 3	.52	14	1.80	Dec. 2	.94	20	.96
10	.74	21	2.26	6	.57	28	1.12
17	1.03	28	2.55	15	.88	May 4	1.78
24	.9	Aug. 4	2.79	23	.87	11	2.06
31	.62	11	2.62	29	.87	18	1.84
Apr. 7	.62	18	2.77	Jan. 6, 1957	1.12	20	.50
14	1.06	25	2.90	12	1.03	28	1.70
21	.93	Sept. 1	1.53	19	1.22	June 1	1.97
28	1.07	10	2.08	26	.92	9	2.25
May 5	.9	15	2.25	Feb. 2	1.12	15	2.38
12	.56	22	1.16	9	.50	22	2.58
19	.92	29	1.32	16	1.44	29	2.06

Gs 2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 8, 1957	2.28	Aug. 31, 1957	3.81	Oct. 14, 1957	4.52	Nov. 24, 1957	5.05
13	2.40	Sept. 7	3.92	19	4.59	30	2.88
21	2.77	14	4.09	27	4.72	Dec. 7	2.55
27	2.85	21	4.21	Nov. 1	4.81	14	1.70
Aug. 3	2.92	28	4.19	11	4.93	21	1.04
17	3.37	Oct. 5	4.35	16	4.97	28	1.19
24	3.58						

Greene County

G 1. Alex Kreil. Formerly Magnus Andersen. Near West Coxsackie. Lat  $42^{\circ}23'20''$ , long  $73^{\circ}48'19''$ . Dug domestic water-table well in glacial till (?) of Pleistocene age, diam 36 in, depth 19 ft, tile-lined to 2, stone-lined to 19. Lsd, about 125 ft above msl. MP, chiseled square on top of inner step on curb (since Dec. 11, 1956), 0.18 ft below lsd. Highest water level 1.34 below lsd, May 10, 1954; lowest 12.75 below lsd, Nov. 1, 1948. Records available: 1945-57. Well not used since early January 1956.

Jan. 5, 1956	6.18	July 12, 1956	5.54	Dec. 27, 1956	3.39	June 30, 1957	5.47
12	4.25	19	5.31	Jan. 3, 1957	3.82	July 7	5.92
19	3.66	26	5.52	11	4.31	14	6.34
26	4.20	Aug. 2	5.95	17	4.59	21	6.87
Feb. 2	4.7	9	6.58	24	4.19	28	7.26
9	4.95	16	6.95	31	4.16	Aug. 4	7.21
16	4.20	23	7.45	Feb. 7	4.38	11	7.57
23	4.41	30	7.49	14	4.46	21	8.08
Mar. 1	4.39	Sept. 6	7.46	21	4.72	28	8.31
8	3.99	13	7.68	28	4.07	Sept. 4	8.52
15	3.67	20	7.4	Mar. 7	3.78	11	8.88
22	3.72	27	7.14	14	2.93	18	9.04
29	3.65	Oct. 4	6.65	21	2.30	25	9.17
Apr. 5	2.67	11	6.91	28	2.40	Oct. 2	9.35
12	1.85	18	7.41	Apr. 5	2.09	9	9.50
19	1.97	25	7.53	11	2.13	16	9.64
26	2.04	Nov. 1	7.71	18	2.75	23	9.68
May 3	1.72	8	7.79	26	2.29	30	9.75
10	3.2	15	7.97	May 2	3.77	Nov. 6	9.86
17	3.6	22	7.36	9	4.30	15	9.92
24	4.15	29	6.66	16	3.07	20	9.83
31	4.4	Dec. 6	6.62	23	2.73	27	9.83
June 7	3.58	7	6.63	30	3.60	Dec. 4	9.83
14	3.95	11	6.64	June 6	4.17	11	9.85
21	4.4	13	6.40	16	4.74	18	9.84
28	4.97	20	5.33	23	5.26	27	3.70
July 5	5.73						

Livingston County

Lv 1. William Redmond. 33 North St., Geneseo. Lat  $42^{\circ}48'00''$ , long  $77^{\circ}48'46''$ . Dug unused water-table well in glacial till (?) of Pleistocene age, diam 4 ft (previously reported as 36 in), depth 28 ft, stone-lined. Lsd, about 790 ft above msl. MP, top of floor board, 1.50 ft above lsd. Highest water level 0.3 below lsd, Mar. 15, 1945; lowest 9.74 below lsd, Nov. 29, 1952. Records available: 1942-57.

Jan. 25, 1956	4.8	July 25, 1956	6.2	Feb. 25, 1957	4.9	July 25, 1957	5.05
Feb. 25	4.16	Aug. 27	7.17	Mar. 25	3.97	Aug. 24	6.5
Mar. 26	2.06	Sept. 25	7.25	Apr. 26	3.9	Sept. 26	7.3
Apr. 26	3.6	Oct. 26	7.9	May 20	3.27	Oct. 25	8.05
May 25	4.68	Nov. 26	7.62	24	3.98	Nov. 25	8.2
June 26	5.46	Dec. 26	4.9	June 25	5.1	Dec. 26	7.35
27	5.4	Jan. 25, 1957	4.2				

Montgomery County

Mt 1. Floyd Groff. Near St. Johnsville. Lat  $43^{\circ}01'43''$ , long  $74^{\circ}42'38''$ . Dug unused water-table well in glacial till of Pleistocene age, diam 24 in, depth 12 ft, stone-lined. Lsd, about 720 ft above msl. MP, top edge of limestone slab at northeast corner of well opening, at lsd. Highest water level 4.08 below lsd, Apr. 15, 1948; lowest 9.99 below lsd, Aug. 28, 1949. Records available: 1942-57.

## Mt 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7, 1956	7.92	July 14, 1956	7.82	Jan. 12, 1957	7.11	July 6, 1957	8.04
14	7.76	21	8.02	19	7.31	13	8.15
21	7.79	28	7.98	26	7.21	20	8.42
28	8.11	Aug. 4	8.22	Feb. 2	7.56	27	8.69
Feb. 4	8.25	11	8.48	9	7.72	Aug. 3	8.27
11	8.27	18	8.66	16	7.71	10	8.13
18	7.92	25	8.69	23	7.79	17	8.35
25	7.91	Sept. 1	8.72	Mar. 2	7.38	24	8.69
Mar. 3	7.83	8	8.68	9	7.41	31	8.83
10	7.13	15	8.84	16	7.29	Sept. 7	8.89
17	7.03	22	8.42	23	7.08	14	9.04
24	7.21	29	7.92	30	6.94	21	9.02
31	7.23	Oct. 2	7.93	Apr. 6	6.73	28	8.59
Apr. 7	4.87	5	7.95	13	5.78	Oct. 5	8.66
14	4.71	13	7.87	20	6.02	12	8.76
21	4.83	20	7.98	27	6.55	19	8.65
28	5.46	27	8.12	May 4	6.79	26	8.07
May 5	5.22	Nov. 3	8.18	11	7.13	Nov. 2	8.08
12	5.87	10	8.22	13	7.18	9	8.04
19	5.96	17	8.27	18	7.18	16	7.98
26	6.44	24	7.88	25	6.89	23	7.64
June 2	5.22	Dec. 1	7.63	June 1	7.13	30	7.53
9	5.92	8	7.52	8	7.42	Dec. 7	7.39
16	6.65	15	6.94	15	7.63	14	7.23
23	7.11	23	6.53	22	7.92	21	6.91
30	7.42	29	6.13	29	8.05	28	6.19
July 7	7.71	Jan. 5, 1957	6.59				

## Niagara County

Ni 30. Richard Tower. Near Youngstown. Lat  $43^{\circ}15'17''$ , long  $78^{\circ}59'19''$ . Dug unused water-table well in lacustrine silt and clay of Pleistocene age, diam 36 in, depth 25 ft, stone-lined. Lsd, 301.3 ft above msl. MP, top edge of wooden cover at tape gage opening, at lsd. Highest water level 2.40 below lsd, May 12, 1956; lowest 9.34 below lsd, Oct. 2, 1954. Records available: 1950-57.

Jan. 7, 1956	3.91	July 7, 1956	5.34	Jan. 12, 1957	4.67	July 6, 1957	5.28
14	4.19	14	5.61	19	4.94	13	5.51
21	4.35	21	5.75	26	3.97	20	5.39
28	4.90	28	5.92	Feb. 2	3.77	27	5.85
Feb. 4	4.18	Aug. 4	6.29	9	3.48	Aug. 3	6.13
11	3.55	11	6.38	16	3.50	10	6.44
18	2.94	18	6.64	23	3.33	17	6.72
25	2.85	25	6.48	Mar. 2	3.11	24	7.06
Mar. 3	2.77	Sept. 1	6.16	9	3.14	31	7.24
10	2.62	8	5.02	16	3.29	Sept. 7	7.31
17	3.09	15	5.57	23	3.44	14	7.39
24	3.34	22	5.50	30	3.52	21	6.75
31	3.44	29	5.21	Apr. 6	3.22	28	6.70
Apr. 7	3.74	Oct. 6	5.38	13	2.95	Oct. 5	6.67
14	3.42	13	5.44	20	3.43	12	6.87
21	3.21	20	5.60	27	3.77	19	6.91
28	2.96	27	5.78	May 4	4.09	26	6.85
May 5	2.77	Nov. 3	5.90	11	4.22	Nov. 2	6.88
12	2.40	10	5.98	18	4.31	9	6.83
19	3.14	17	5.91	20	3.86	16	6.66
26	3.45	24	5.94	25	3.62	23	6.45
June 2	3.76	Dec. 1	5.89	June 1	4.27	30	6.50
9	4.19	8	4.92	8	4.44	Dec. 7	5.82
16	4.54	15	4.69	15	4.91	14	5.71
23	4.87	22	4.47	22	4.39	21	5.19
26	4.95	29	4.19	29	5.08	28	4.98
30	5.16	Jan. 5, 1957	4.44				

## Rockland County

Ro 18. Palisades Interstate Park Comm. In Bear Mountain section near Doodletown Rd. and Seven Lakes Dr. Lat  $41^{\circ}18'02''$ , long  $73^{\circ}59'30''$ . Drilled unused water-table well in glacial drift of Pleistocene age, diam 6 in, depth 61 ft. Lsd, about 380 ft above msl. MP, top of casing, 3.65 ft above lsd. Highest water level 11.15 below lsd, Mar. 14, 1952; lowest 27.87 below lsd, Oct. 31, 1953. Records available: 1949-57.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Ro 18--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6, 1956	17.76	June 29, 1956	17.50	Dec. 28, 1956	16.36	July 15, 1957	20.28
13	17.96	July 6	18.00	Jan. 4, 1957	15.95	19	20.40
20	17.55	15	17.47	11	16.23	26	20.90
27	17.86	20	17.53	18	16.57	Aug. 2	21.46
Feb. 3	18.05	27	17.96	25	16.83	9	22.03
10	16.43	Aug. 3	18.75	Feb. 1	16.93	16	22.93
17	15.75	17	20.13	8	16.95	23	23.55
24	15.16	24	20.46	15	16.08	30	23.83
Mar. 2	15.14	31	20.77	22	15.87	Sept. 6	23.42
10	15.54	Sept. 7	20.72	Mar. 1	15.82	13	23.54
16	15.08	14	20.53	8	15.21	20	23.55
23	15.08	21	20.30	15	14.21	27	23.55
30	14.23	28	20.50	22	14.44	Oct. 4	24.15
Apr. 6	13.27	Oct. 5	20.87	29	15.04	11	24.01
13	12.53	12	21.08	Apr. 5	15.08	18	23.90
20	13.18	19	21.87	12	11.95	25	23.84
27	14.44	26	22.20	19	13.94	Nov. 1	23.75
May 4	14.30	Nov. 2	21.60	26	14.98	8	24.22
11	13.93	5	20.87	May 3	15.76	15	24.35
18	15.08	9	20.38	10	16.40	22	23.48
25	15.75	16	20.53	17	16.93	29	23.46
29	16.06	23	20.38	24	17.15	Dec. 6	23.11
June 3	16.30	30	20.32	31	17.53	13	22.19
8	15.55	Dec. 7	20.61	June 7	17.96	20	18.74
15	16.02	14	20.32	14	18.55	27	15.27
22	16.91	21	17.38	28	19.62		

## St. Lawrence County

St 40. State Dept. of Conservation. Near Brasher Falls. Lat  $44^{\circ}49'02''$ , long  $74^{\circ}45'55''$ . Dug domestic water-table well in glacial sand of Pleistocene age, diam 36 in, depth 12 ft, concrete cased to 12, open end. Lsd, about 300 ft above msl. MP, top edge of casing, 0.30 ft above lsd. Highest water level 3.42 below lsd, Apr. 6, 1955; lowest 9.21 below lsd, Oct. 26, 1957. Records available: 1953-57.

Jan. 7, 1956	8.32	July 14, 1956	6.56	Jan. 12, 1957	7.76	July 13, 1957	7.30
14	8.05	21	6.81	19	7.78	20	7.34
21	8.07	28	7.04	26	7.25	27	7.88
28	8.06	Aug. 4	7.05	Feb. 2	6.98	Aug. 3	7.94
Feb. 4	8.36	11	7.67	9	7.05	10	8.21
11	8.4	18	7.86	16	7.25	17	8.48
18	8.4	25	8.09	23	6.94	24	8.69
25	8.39	Sept. 1	8.08	Mar. 2	6.55	31	8.87
Mar. 3	8.33	8	8.11	9	6.16	Sept. 7	8.97
10	8.05	15	8.14	16	6.22	14	8.98
17	7.92	22	8.16	23	6.01	21	9.02
24	7.91	29	8.09	30	6.01	28	9.18
31	7.92	Oct. 6	8.07	Apr. 6	5.82	Oct. 5	9.15
Apr. 7	6.54	13	8.19	13	5.98	12	9.18
14	5.91	20	8.20	20	5.75	19	9.16
21	5.72	27	8.29	27	5.93	26	9.21
28	5.79	Nov. 3	8.30	May 4	6.12	Nov. 2	9.20
May 12	5.09	10	8.27	11	6.31	9	9.18
19	5.00	17	8.33	18	5.91	16	9.16
26	5.39	25	8.15	25	5.67	23	9.08
June 2	4.86	Dec. 1	8.15	June 1	6.01	30	8.69
9	5.05	8	7.43	8	6.09	Dec. 7	8.49
16	5.38	15	7.78	15	6.33	14	8.34
23	5.39	22	7.57	22	6.64	21	8.05
30	6.20	29	7.56	29	6.92	28	7.62
July 7	6.32	Jan. 5, 1957	7.56	July 6	7.15		

St 392. Leland Blevins. Hermon. Lat  $44^{\circ}28'10''$ , long  $75^{\circ}13'31''$ . Dug unused water-table well in glacial outwash of Pleistocene age, diam 36 in, depth 28 ft. Lsd, about 565 ft above msl. MP, top edge of board nailed to wooden cover, at lsd. Highest water level 2.72 below lsd, Apr. 2, 1955; lowest 18.48 below lsd, Oct. 8, 1955. Records available: 1949-57.

Jan. 7, 1956	14.90	Feb. 11, 1956	14.87	Mar. 10, 1956	13.63	Apr. 14, 1956	8.68
14	14.74	18	14.53	17	13.34	21	7.59
21	14.64	25	14.26	24	13.00	May 6	7.01
28	14.62	29	14.23	31	12.82	13	7.02
Feb. 4	14.66	Mar. 3	13.96	Apr. 7	10.87	20	5.13

## St 392--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 28, 1956	4.29	Oct. 28, 1956	16.80	Apr. 14, 1957	4.76	Aug. 25, 1957	11.72
June 3	3.50	Nov. 4	16.92	21	5.14	Sept. 1	12.00
10	4.73	11	17.00	28	5.51	8	13.33
17	5.31	18	16.90	May 5	5.82	15	14.56
24	6.47	25	16.82	12	6.22	22	14.33
July 1	7.37	30	16.83	19	5.78	29	14.66
8	8.18	Dec. 2	16.83	21	5.17	Oct. 6	14.99
15	8.01	16	15.82	26	5.52	13	15.01
22	9.28	23	15.15	June 2	5.42	27	15.38
29	10.20	30	14.24	9	5.32	Nov. 3	15.26
Aug. 12	11.99	Jan. 13, 1957	13.68	23	7.00	10	15.01
Sept. 2	14.30	20	13.26	30	7.37	17	14.72
9	14.33	27	11.68	July 7	7.47	24	14.01
16	15.34	Mar. 3	8.15	14	8.57	Dec. 1	12.00
23	15.68	10	7.78	21	8.27	8	11.34
Oct. 4	16.20	17	7.24	28	8.35	15	9.93
7	16.32	24	6.14	Aug. 4	8.98	22	9.91
14	16.60	Apr. 7	5.61	11	9.36	29	5.81
21	16.79						

Schenectady County

Sn 128. City of Schenectady. Lat  $42^{\circ}49'26''$ , long  $73^{\circ}59'22''$ . Dug unused water-table well in glacial outwash gravel of Pleistocene age, diam 47 ft, depth 40 ft. Lsd, 241.36 ft above msl. MP, top of metal strip fastened to timber access cover\* at edge of ventilation hole, at lsd. Highest water level e17.9 below lsd, Oct. 17, 1955; lowest 37.63 below lsd, Feb. 22, 1955. Records available: 1946-57. Water level affected by stage of Mohawk River and pumping from city well field.

## Highest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	33.4	32.7	31.3	28.7	29.7	29.6	31.9	33.8	30.9	30.4	30.7	31.4
10	33.2	33.7	25.7	27.2	31.5	31.8	30.7	34.3	30.7	30.7	30.8	31.8
15	29.3	33.8	29.9	27.6	30.5	32.3	30.4	32.8	31.0	30.5	31.2	32.6
20	e31.2	33.9	30.7	28.3	30.4	32.5	32.2	31.9	30.4	30.6	30.8	34.2
25	e32.3	34.5	32.7	30.8	31.0	31.9	30.9	32.1	30.2	30.8	30.7	34.1
Eom	e32.5	32.7	33.9	26.7	28.8	32.4	32.2	33.0	30.3	31.0	31.0	35.1
1957												
5	35.6	30.3	32.1	35.9	34.5	33.5	32.3	32.2	33.5	33.6	32.4	32.7
10	35.7	31.0	34.2	34.5	36.0	33.3	33.3	33.3	33.3	33.3	32.2	31.8
15	e36.1	32.1	34.6	34.8	32.1	34.6	33.6	33.4	32.8	32.6	32.8	33.0
20	j36.5	33.3	34.4	35.2	31.0	35.8	35.7	33.6	32.9	32.1	32.5	35.0
25	k25	33.7	34.9	35.1	31.0	33.7	34.2	34.5	32.5	32.6	32.1	34.4
Eom	28.8	30.5	35.4	34.2	31.8	32.5	32.1	33.4	33.1	33.1	32.5	35.1

e Estimated.

j Water level at 1 a.m.

k Extrapolated water level at 11 p.m.

Steuben County

Sb 240. Corning Glass Works. West Market St., Corning. Lat  $42^{\circ}08'37''$ , long  $77^{\circ}03'18''$ . Drilled unused artesian well in glacial outwash of Pleistocene age, diam 10 in, depth 78 ft, cased, screened. Lsd, about 940 ft above msl. MP, horizontal line across top edge of manhole rim, 4.45 ft above floor of pit, at lsd. Highest water level 20.80 below lsd, Apr. 2, 1951; lowest 31.8 below lsd, Dec. 16, 1957. Records available: 1943-44, 1946-57. Water level affected by nearby pumping and possibly by river stage.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1956	27.2	Mar. 12, 1956	22.2	May 21, 1956	26.3	July 23, 1956	27.5
9	27.8	19	25.0	28	27.3	30	28.0
16	27.6	27	26.0	June 4	27.4	Aug. 6	28.6
23	28.4	Apr. 2	25.4	11	28.4	13	28.5
30	28.9	9	22.6	18	28.6	20	29.1
Feb. 6	29.1	16	24.2	25	29.2	27	29.2
13	28.2	23	25.1	29	29.33	Sept. 3	27.4
20	27.2	30	25.2	July 2	29.5	10	28.0
27	27.0	May 7	25.7	9	29.1	17	28.1
Mar. 5	26.0	14	25.2	16	28.1	24	28.2

## Sb 240--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 1, 1956	28.7	Jan. 28, 1957	27.6	May 20, 1957	26.0	Sept. 16, 1957	31.6
8	28.6	Feb. 4	27.4	27	26.4	23	31.4
15	29.0	11	27.4	June 3	27.8	30	31.3
22	29.6	18	27.6	10	28.6	Oct. 7	31.6
29	29.3	25	28.2	17	29.2	14	31.1
Nov. 5	27.6	Mar. 4	26.7	24	29.0	21	31.5
13	28.3	11	27.6	July 1	29.8	28	31.4
19	28.6	18	25.1	8	29.6	Nov. 4	31.2
26	28.6	25	26.3	15	30.1	12	31.4
Dec. 3	29.2	Apr. 1	26.7	22	30.3	18	31.3
10	28.1	8	23.5	29	29.6	25	31.3
17	25.8	15	25.0	Aug. 5	30.0	Dec. 2	31.4
26	24.7	22	25.0	12	30.3	9	31.4
31	25.3	29	26.0	19	31.2	16	31.8
Jan. 7, 1957	26.0	May 6	26.6	26	31.6	23	29.8
14	26.8	13	27.2	Sept. 3	31.3	30	29.5
21	27.0	17	27.2	9	31.7		

Washington County

W 264. Village of Salem. North Main St., Salem. Lat  $43^{\circ}10'27''$ , long  $73^{\circ}19'43''$ . Dug fire-protection water-table well in glacial gravel of Pleistocene age, approximate size 8 by 12 ft, depth 15 ft. Lsd, 485.5 ft above msl. MP, top edge of concrete cover at north side of square opening, at lsd. Highest water level 7.19 below lsd, May 18, 1953; lowest 11.32 below lsd, Oct. 5, 1953. Records available: 1946-57. Water level may be affected by floods of nearby stream.

Jan. 2, 1956	10.59	July 2, 1956	10.31	Dec. 24, 1956	9.70	July 1, 1957	9.92
9	10.65	9	10.37	31	9.52	8	9.97
16	10.60	16	10.39	Jan. 7, 1957	9.69	15	10.08
23	10.57	23	10.42	14	9.77	22	10.37
30	10.48	30	10.54	21	9.88	29	10.55
Feb. 5	10.40	Aug. 6	10.70	28	9.48	Aug. 5	10.59
12	10.38	13	10.78	Feb. 4	9.77	12	10.55
19	10.29	20	10.84	11	9.91	19	10.73
26	10.12	27	10.88	18	10.08	26	10.86
Mar. 5	10.08	Sept. 3	10.82	25	10.29	Sept. 2	10.95
12	10.02	10	10.64	Mar. 4	10.28	9	11.01
19	9.84	17	10.56	11	10.17	16	11.02
26	9.67	24	10.35	18	10.08	23	11.02
Apr. 2	9.44	25	10.32	25	9.88	30	11.03
9	7.85	Oct. 1	10.36	Apr. 1	9.84	Oct. 7	11.02
14	8.10	5	10.29	8	9.78	14	11.03
15	8.12	8	10.42	15	9.37	21	11.01
22	8.69	15	10.46	22	9.49	28	11.02
29	8.45	22	10.49	29	9.82	Nov. 4	11.01
May 7	8.9	29	10.51	May 6	10.07	11	11.02
14	9.08	Nov. 5	10.49	13	10.13	18	10.79
21	9.49	12	10.40	20	10.21	25	10.51
28	9.75	19	10.24	27	10.27	Dec. 2	10.38
June 4	9.77	26	10.05	June 3	10.38	9	10.22
11	9.92	Dec. 3	10.09	10	10.49	16	9.88
18	10.14	10	10.04	17	10.56	23	8.69
25	10.29	17	9.85	24	10.63	30	8.77

n Reported pumped dry and cleaned on Sept. 26, 1957.

Wayne County

Wn 29. Village of Marion. 55 Mill St., Marion. Lat  $43^{\circ}08'14''$ , long  $77^{\circ}11'19''$ . Drilled unused artesian well in Lockport dolomite, diam 8 in, depth 106 ft (previously reported as 107 ft, cased to 25). Lsd, about 460 ft above msl. MP, top of casing, 0.80 ft above lsd. Highest water level 10.03 below lsd, Mar. 30, 1950; lowest 21.40 below lsd, Sept. 3, 1957. Records available: 1947-57.

Jan. 4, 1956	18.00	Feb. 15, 1956	17.47	Mar. 28, 1956	19.42	May 9, 1956	18.88
11	17.85	22	17.60	Apr. 4	18.68	16	18.76
18	17.85	29	17.52	11	18.89	23	18.90
25	18.01	Mar. 7	16.70	18	18.93	30	19.03
Feb. 1	18.15	14	17.84	25	19.20	June 6	19.15
8	17.78	21	19.25	May 2	18.82	13	19.31

## NEW YORK, WYOMING COUNTY

81

Wn 29--Continued.

	Date	Water level	Date	Water level	Date	Water level	Date	Water level
June	20, 1956	19.38	Sept. 26, 1956	19.98	May 22, 1957	18.38	Sept. 11, 1957	21.32
	25	19.42	Oct. 3	19.94	29	18.54	18	21.28
	27	19.40	10	19.95	June 5	18.67	25	21.32
July	4	19.75	17	20.00	12	18.92	Oct. 2	21.25
	11	19.63	24	20.00	18	19.10	9	21.30
	18	19.71	31	19.90	25	19.19	16	21.34
	25	19.80	Nov. 7	19.70	July 3	19.37	23	21.26
Aug.	1	20.08	14	19.70	10	19.54	30	20.96
	8	20.03	21	19.72	17	19.69	Nov. 6	20.69
	15	20.30	28	19.40	31	20.13	13	20.58
	22	20.41	Dec. 5	19.48	Aug. 7	20.24	20	20.38
	29	20.31	12	19.49	14	20.44	27	20.36
Sept.	5	20.00	19	19.04	21	20.73	Dec. 4	20.46
	12	20.08	26	19.05	28	20.96	11	20.29
	19	19.98	May 21, 1957	18.38	Sept. 3	21.40	18	20.25

Westchester County

We 4. Westchester County Jail. Martine Ave. and Court St., White Plains. Lat  $41^{\circ}01'52''$ , long  $73^{\circ}46'04''$ . Drilled unused artesian well in Inwood limestone, diam 6 in, depth 206 ft (previously reported as 398 ft). Lsd, about 215 ft above msl. MP, top of casing, at lsd. Highest water level 24.1 below lsd, Apr. 20, 1953, Apr. 16, 1956; lowest 32.4 below lsd, Nov. 26, 1957. Records available: 1953-57. Water level affected by nearby pumping.

Weekly highest water level from recorder graph								
	Jan. 9, 1956	25.1	July 9, 1956	25.0	Jan. 7, 1957	25.9	July 22, 1957	27.1
	16	25.0	16	25.2	13	25.9	29	27.4
	23	25.1	23	25.2	Feb. 11	25.8	Aug. 5	27.2
	30	25.2	30	25.3	18	25.8	12	27.2
Feb.	6	25.2	Aug. 13	25.5	25	25.9	19	27.5
	13	25.1	20	25.6	Mar. 4	25.9	26	27.4
	20	25.0	27	25.8	18	26.0	Sept. 2	e27.5
Mar.	5	24.9	Sept. 17	26.2	25	26.1	9	27.6
	12	24.9	24	26.3	Apr. 1	26.2	16	27.7
	19	24.7	Oct. 1	26.3	8	25.6	23	27.8
	26	24.5	7	26.4	15	25.4	30	27.8
Apr.	2	24.5	15	26.5	22	25.6	Oct. 7	27.8
	8	24.3	22	26.5	29	25.7	14	27.9
	16	24.1	29	26.6	May 6	25.8	21	27.9
	30	24.2	Nov. 5	26.2	13	25.8	28	28.0
May	7	24.4	12	26.2	20	26.0	Nov. 4	28.0
	14	24.5	19	26.3	27	26.0	11	28.1
	21	24.7	26	26.5	June 2	e26.3	18	28.0
	28	24.7	Dec. 2	26.3	10	26.4	25	28.0
June	4	24.8	10	26.3	17	26.6	Dec. 2	27.9
	11	24.8	17	25.9	24	26.7	9	27.5
	18	25.0	24	25.8	July 1	26.7	26	26.9
	25	25.0	31	25.7	7	e27.1	30	26.8

e Estimated.

Wyoming County

Wo 1. State Dept. of Conservation. Letchworth State Park, near Castile. Lat  $42^{\circ}37'39''$ , long  $78^{\circ}00'03''$ . Dug unused water-table well in glacial till (?) of Pleistocene age, diam 24 in, depth 14 ft, stone-lined. Lsd, about 1,030 ft above msl. MP, paint mark on top of stone in second course on north side of well below large rounded stone, 0.50 ft below lsd. Highest water level 0.5 below lsd, Apr. 5, 1947; lowest 12.94 below lsd, Nov. 22, 1952. Records available: 1942-57.

	Jan. 7, 1956	4.20	Mar. 24, 1956	3.04	June 3, 1956	3.48	Aug. 5, 1956	8.42
	14	4.44	Apr. 1	1.24	10	3.50	12	9.00
	21	4.58	7	1.82	17	4.26	19	9.44
	28	4.90	14	2.35	24	5.03	26	9.80
Feb.	4	5.03	21	2.39	26	5.27	Sept. 2	9.86
	11	4.50	29	.96	July 1	5.86	9	9.77
	18	3.85	May 6	1.80	8	6.65	16	9.73
	25	3.36	12	1.15	15	6.04	23	9.92
Mar.	2	3.09	20	2.85	26	7.01	30	10.16
	13	1.91	27	3.56	29	7.53	Oct. 7	10.35

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

## Wo 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 14, 1956	10.58	Feb. 7, 1957	3.86	May 26, 1957	2.86	Sept. 15, 1957	10.78
21	10.77	15	3.37	June 2	3.74	22	11.05
28	10.93	22	4.08	9	4.21	29	11.31
Nov. 4	11.06	Mar. 1	2.58	16	4.45	Oct. 4	11.46
	11.15	9	2.95	23	4.97	12	11.71
	11.26	16	2.00	30	5.56	20	11.90
	11.20	23	2.41	July 7	5.48	26	12.01
	11.13	29	3.19	14	6.13	Nov. 2	12.15
	8.04	Apr. 5	1.48	21	7.12	9	12.25
14	3.94	13	1.98	28	7.81	16	12.36
21	3.30	20	2.02	Aug. 4	8.36	24	12.46
27	2.92	27	2.32	11	8.92	30	12.54
Jan. 4, 1957	3.73	May 5	3.47	18	9.38	Dec. 7	12.62
	4.29	12	3.89	25	9.78	14	12.70
	4.50	19	3.47	Sept. 1	10.17	21	12.74
	1.27	20	.92	8	10.47	28	12.68
	3.20						

## LONG ISLAND

## Kings County

K30. Detecto Scales, Inc. Park and Nostrand Aves. Lat  $40^{\circ}41'50''$ , long  $73^{\circ}57'15''$ . Drilled unused water-table well in deposits of late Pleistocene age, diam 8 in, depth 56 ft, screen assumed at bottom. Lsd, 17.8 ft above msl. MP, top of recorder base, 4.95 ft below lsd. Highest water level 3.31 below msl, Aug. 2, 1956; lowest 29.75 below msl, Nov. 8, 1941. Records available: 1935-57.

Feb. 3, 1956	-4.35	Aug. 2, 1956	-3.31	Jan. 25, 1957	-3.54	July 24, 1957	-3.54
Mar. 5	4.16	Sept. 4	3.40	Feb. 27	3.46	Aug. 27	3.62
29	4.01	26	3.61	Mar. 27	3.53	Sept. 24	3.64
May 2	3.66	Oct. 25	3.75	Apr. 24	3.38	Oct. 30	3.88
June 5	3.48	Nov. 29	3.70	May 28	3.35	Nov. 22	3.83
July 3	3.56	Dec. 18	3.80	June 27	3.43	Dec. 31	3.68

K1264. City of New York. Dept. of Water Supply, Gas and Electricity. East 37th St. and Snyder Ave. Lat  $40^{\circ}39'00''$ , long  $73^{\circ}56'35''$ . Driven observation water-table well in deposits of late Pleistocene age, diam  $1\frac{1}{4}$  in, depth 67 ft, screened 65-67. Lsd, 43.9 ft above msl. MP, top of 1 $\frac{1}{4}$ -in coupling, 0.01 ft below lsd. Highest water level 5.64 above msl, Jan. 25, 1957; lowest 15.56 below msl, Apr. 3, May 7, 1947. Records available: 1933-35, 1941-57.

Feb. 3, 1956	+5.24	Aug. 2, 1956	+5.32	Jan. 25, 1957	+5.64	July 24, 1957	+5.28
Mar. 6	5.11	Sept. 4	5.22	Feb. 27	5.02	Aug. 27	5.12
29	5.41	26	5.19	Mar. 27	5.22	Sept. 24	5.04
May 3	5.34	Oct. 25	5.10	Apr. 24	5.24	Oct. 30	4.91
June 5	5.54	Nov. 29	5.19	May 28	5.54	Nov. 22	4.81
July 3	5.44	Dec. 20	5.17	June 27	5.43	Dec. 30	4.81

## Nassau County

N7. Long Island State Park Comm. Corona Ave. and Remsen St., Valley Stream. Lat  $40^{\circ}40'45''$ , long  $73^{\circ}41'25''$ . Drilled unused artesian well in Lloyd sand member of Raritan formation, diam 10 to 6 in, depth 911 ft, screened 851-911. Lsd, 20.8 ft above msl. MP, top of 10-in coupling, 2.00 ft above lsd. Highest water level 12.75 above msl, Mar. 9, 1941; lowest 0.56 below msl, Aug. 4, 1954. Records available: 1936-57.

Jan. 25, 1956	+9.56	July 25, 1956	+5.70	Jan. 29, 1957	+8.45	July 29, 1957	+0.75
Feb. 27	9.80	Aug. 28	3.43	Feb. 26	8.09	Aug. 29	2.02
Mar. 28	9.68	Sept. 26	5.62	Apr. 2	10.89	Sept. 25	4.82
May 1	9.95	Oct. 24	6.02	25	10.90	Oct. 31	7.47
28	9.02	Nov. 29	9.42	May 31	8.72	Nov. 26	8.48
June 26	5.86	Dec. 17	9.42	June 27	3.20	Dec. 18	8.20

N9. Long Island State Park Comm. Corona Ave. and Remsen St., Valley Stream. Lat  $40^{\circ}40'50''$ , long  $73^{\circ}41'35''$ . Drilled unused artesian well in sands of Magothy (?) formation, diam 6 to 4 in, depth 137 ft, screen assumed at bottom. Lsd, 23.2 ft above msl. MP, top of casing, 1.48 ft above lsd. Highest water level 23.57 above msl, Sept. 23, 1938; lowest 19.00 above msl, July 29, 1957. Records available: 1936-57.

## N9--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25, 1956	+20.03	July 25, 1956	+20.55	Feb. 26, 1957	+20.68	Aug. 29, 1957	+19.25
Feb. 27	20.93	Oct. 10	20.59	Apr. 2	21.05	Sept. 25	19.75
Mar. 28	21.38	24	20.58	25	20.93	Oct. 31	19.74
May 1	21.32	Dec. 3	20.68	May 31	20.03	Nov. 26	19.71
		17	20.88	June 27	19.88	Dec. 18	20.15
June 26	21.01	Jan. 29, 1957	20.80	July 29	19.00		
	20.32						

N180. City of New York. Dept. of Water Supply, Gas and Electricity. Sunrise Highway and Seamans Neck Rd., Seaford. Lat  $40^{\circ}40'20''$ , long  $73^{\circ}29'45''$ . Drilled unused artesian well in sand of Magothy (?) formation, diam 4 to 6 in, depth 762 ft, screen assumed at bottom. Lsd, 15.3 ft above msl. MP, top of recorder shelf, 9.80 ft above lsd. Highest water level 21.08 above msl, June 6, 1952; lowest 16.35 above msl, Nov. 21, 1957. Records available: 1945-57. Recording gage removed Apr. 2, 1957.

Mean water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+18.69	+18.52	+18.95	+19.40	+19.19	+19.03	+18.38	+17.69	+17.85	+17.92	+18.85	+18.45
10	18.92	18.71	18.98	19.39	19.24	18.75	18.38	18.13	17.65	18.08	18.50	18.50
15	18.79	18.88	19.04	19.56	19.06	17.75	18.34	17.86	....	17.87	18.30	18.40
20	18.59	18.93	19.35	19.04	19.12	17.86	....	17.53	18.21	18.04	18.33	18.50
25	18.40	19.11	19.32	18.85	18.88	18.12	18.29	....	18.10	18.08	18.20	18.70
Eom	18.41	18.90	....	19.16	19.01	18.20	18.03	....	18.14	18.53	18.64	....

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+18.62	+18.25	+18.40	....	....	....	....	....	....	....	....	....
10	18.40	18.48	18.60	....	....	....	....	....	....	....	....	....
15	....	18.60	18.43	....	....	....	....	....	....	....	....	....
20	18.15	18.37	18.65	....	....	....	....	....	....	....	....	....
25	18.55	18.29	18.41	....	....	....	....	....	....	....	....	....
Eom	18.45	18.70	18.65	....	....	....	....	....	....	....	....	....

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 25, 1957	+18.73	July 29, 1957	+16.87	Sept. 27, 1957	+17.34	Nov. 21, 1957	+16.35
June 4	17.81	Aug. 30	17.50	Oct. 31	16.63	Dec. 18	16.99
27	17.35						

N1102. Nassau County Dept. of Public Works. Willets Rd. near Valley Rd., Lake Success. Lat  $40^{\circ}46'15''$ , long  $73^{\circ}42'15''$ . Driven observation water-table well in deposits of late Pleistocene age, diam  $2\frac{1}{2}$  in, depth 140 ft, screened 138-140. Lsd, 185.8 ft above msl. MP, top of casing, 0.02 ft above lsd. Highest water level 59.12 above msl, May 25, 1953; lowest 49.97 above msl, Nov. 6, 1957. Records available: 1939-57.

Jan. 25, 1956	+54.22	July 25, 1956	+54.09	Dec. 19, 1956	+53.37	Aug. 29, 1957	+50.22
Mar. 5	54.49	Aug. 28	53.80	Feb. 1, 1957	51.12	Sept. 25	50.10
May 1	54.74	Oct. 1	53.53	Apr. 22	52.33	Nov. 6	49.97
June 1	54.62	25	53.27	July 3	51.12	Dec. 19	50.05
26	54.16	Nov. 29	53.54				

N1110. Nassau County Dept. of Public Works. Henry St. near Southern State Parkway, North Valley Stream. Lat  $40^{\circ}40'45''$ , long  $73^{\circ}42'00''$ . Driven observation water-table well in deposits of late Pleistocene age, diam  $1\frac{1}{4}$  in, depth 27 ft, screened 25-27. Lsd, 30.9 ft above msl. MP, top of casing, 0.05 ft below lsd. Highest water level 21.05 above msl, Apr. 21, 1939, June 6, 1946; lowest 16.00 above msl, Sept. 25, 1957. Records available: 1939-57.

Jan. 25, 1956	+18.33	July 25, 1956	+19.05	Feb. 4, 1957	+18.81	July 25, 1957	+16.51
Feb. 27	18.77	Aug. 28	18.37	26	18.74	Aug. 29	16.60
Mar. 28	19.55	Sept. 26	18.61	Apr. 2	19.06	Sept. 25	16.00
May 1	19.56	Oct. 24	18.61	25	19.27	Oct. 31	16.85
28	19.27	Nov. 29	18.75	May 31	18.21	Nov. 26	16.74
June 26	18.45	Dec. 17	18.05	June 27	17.53	Dec. 18	16.38

N1121. Nassau County Dept. of Public Works. Jericho Turnpike, Locust Grove. Lat  $40^{\circ}48'25''$ , long  $73^{\circ}31'20''$ . Drilled observation artesian well in sands of Magothy (?) formation, diam 4 in, depth 185 ft, screened 181-185. Lsd, 228.2 ft above msl. MP, top of recorder shelf, 0.54 ft below lsd. Highest water level 89.74 above msl, Oct. 6, Dec. 7, 1953; lowest 83.72 above msl, Jan. 20, 1943. Records available: 1943-57.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

N1212--Continued.

Mean water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+88.24	+88.50	+88.58	+88.68	+88.80	+89.13	+89.02	+89.40	+89.47	+89.35	+89.38	+89.10
10	88.25	88.43	88.35	88.58	89.05	89.12	89.13	89.55	89.50	89.25	89.26	89.23
15	89.34	88.52	88.43	88.93	88.95	88.97	89.15	89.38	89.47	89.41	89.30	89.30
20	88.42	88.54	88.54	88.68	88.97	88.93	89.05	89.23	89.48	89.30	89.30	89.38
25	88.32	88.85	88.63	88.67	88.81	89.05	89.23	89.35	89.41	89.20	89.35	89.35
Eom	88.58	88.34	88.70	88.83	89.17	88.99	89.41	89.39	89.50	89.47	89.27	.....

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30, 1957	+89.18	June 5, 1957	+88.08	Aug. 28, 1957	+86.74	Nov. 21, 1957	+86.20
Feb. 26	89.36	July 2	87.64	Sept. 23	86.66	Dec. 19	86.22
Apr. 25	88.59	29	86.84	Nov. 4	86.49		

N1247. Nassau County Dept. of Public Works. Near Motor Parkway, Bethpage. Lat 40°45'55", long 73°26'30". Driven observation water-table well in deposits of late Pleistocene age, diam 1 1/4 in., depth 110 ft, screened 108-110. Lsd, 157.1 ft above msl. MP, top of casing, 0.03 ft above lsd. Highest water level 76.98 above msl, July 28, 1939; lowest 70.52 above msl, July 31, 1942. Records available: 1939-57.

Jan. 26, 1956	+74.41	Aug. 30, 1956	+75.61	Feb. 26, 1957	+74.08	Aug. 30, 1957	+72.98
Feb. 29	74.43	Oct. 3	75.41	Apr. 3	73.69	Sept. 23	72.71
May 2	75.17	Nov. 9	75.43	25	73.66	Nov. 4	72.10
29	75.43	30	74.80	June 4	73.87	21	71.76
June 27	75.85	Dec. 18	74.63	27	73.88	Dec. 19	71.49
July 27	75.78	Jan. 29, 1957	74.38	Aug. 1	73.33		

N1259. U. S. Geol. Survey. Hicksville-Massapequa Rd., Plainedge. Lat 40°43'15", long 73°29'05". Driven observation water-table well in deposits of late Pleistocene age, diam 1 1/4 in., depth 43 ft (previously reported as 48 ft), screened 41-43 (previously reported as 46-48). Lsd, 78.4 ft above msl. MP, top of casing, 0.53 ft above lsd. Highest water level 56.99 above msl, June 23, 1952; lowest 47.83 above msl, Jan. 24, 1933. Records available: 1909-10, 1912-16, 1930-35, 1937-57.

Jan. 26, 1956	+54.17	July 25, 1956	+54.19	Jan. 29, 1957	+52.98	July 29, 1957	+51.67
Feb. 29	54.45	Aug. 29	53.61	Feb. 26	52.91	Aug. 30	51.28
Mar. 28	54.97	Sept. 26	53.16	Apr. 2	52.91	Sept. 23	51.11
May 1	55.45	Oct. 24	53.06	25	53.93	Oct. 31	50.83
31	54.78	Nov. 30	53.07	May 31	53.37	Nov. 21	50.70
June 27	54.19	Dec. 17	53.05	June 27	52.57	Dec. 27	51.19

N1616. Nassau County Dept. of Public Works. Post Ave. and Argyle Rd., Westbury. Lat 40°45'55", long 73°35'10". Driven observation water-table well in deposits of late Pleistocene age, diam 1 1/2 in., depth 51 ft, screened 49-51. Lsd, 122.8 ft above msl. MP, top of casing, at lsd. Highest water level 85.42 above msl, June 1, 1939; lowest 74.05 above msl, Feb. 27, 1933. Records available: 1913-15, 1932-57.

Jan. 27, 1956	+83.15	July 26, 1956	+83.65	Jan. 29, 1957	+82.00	July 26, 1957	+81.15
Feb. 29	83.80	Aug. 30	83.30	Feb. 26	81.59	Aug. 28	80.58
Mar. 28	83.06	Sept. 25	83.01	Apr. 2	81.33	Sept. 23	80.28
Apr. 27	83.68	Oct. 24	82.68	25	81.92	Nov. 4	79.73
June 4	84.14	Dec. 3	82.42	June 4	82.05	21	79.50
27	83.87	18	82.13	July 1	81.75	Dec. 19	79.17

N2528. Nassau County Dept. of Public Works. Chicken Valley and Wolver Hollow Rds., Upper Brookville. Lat 40°51'00", long 73°34'40". Drilled observation artesian well in sands of Magothy (?) formation, diam 6 to 4 in., depth 282 ft, slotted 278-282. Lsd, 92.5 ft above msl. MP, top of 6-in nipple (since July 25, 1957), 0.77 ft above lsd. Highest water level 79.92 above msl, July 25, 1957; lowest 68.03 above msl, Jan. 22, 30, 1951. Records available: 1947-57.

Jan. 26, 1956	+71.16	Aug. 28, 1956	+72.06	Feb. 14, 1957	+78.53	July 25, 1957	+79.92
Mar. 5	71.51	Sept. 26	71.85	26	71.80	Aug. 28	72.89
28	71.78	Oct. 24	71.73	Mar. 29	70.80	Sept. 23	71.05
Apr. 27	72.28	Dec. 4	71.84	Apr. 26	70.63	Oct. 25	70.05
May 28	72.36	19	71.44	May 29	78.94	Nov. 21	69.57
June 28	72.35	Jan. 30, 1957	76.98	June 28	72.91	Dec. 27	69.20
July 26	72.31						

N3355. Nassau County Dept. of Public Works. Old Country and Round Swamp Rds., Plainview. Lat 40°46'25", long 73°26'55". Drilled observation artesian well in Lloyd sand member of Raritan formation, diam 8 to 4 in., depth 1,090 ft, screened 1,070-1,090. Lsd, 183.3 ft above msl. MP, top of casing, 0.80 ft below lsd. Highest water level 36.52 above msl, Apr. 9, 1957; lowest 31.17 above msl, Sept. 30, 1951. Records available: 1951-57. Recorder gage removed July 2, 1957.

N3355--Continued.

Mean water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+34.73	+35.20	+35.56	+35.90	+35.86	+35.77	+34.91	+34.70	+34.09	+34.63	+35.11	+35.43
10	35.03	35.31	35.45	35.92	35.91	35.74	34.98	34.65	34.09	34.68	35.30	35.63
15	35.17	35.40	35.54	36.08	35.90	35.72	34.86	34.52	34.26	34.72	35.26	35.68
20	35.13	34.56	35.73	35.92	35.67	35.51	34.68	35.39	34.40	34.66	35.30	35.79
25	35.01	35.81	35.85	35.73	35.51	35.52	.....	34.23	34.41	34.67	35.50	36.00
Eom	.....	35.53	35.93	35.92	35.85	35.07	34.70	34.21	34.54	34.98	35.66	.....

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 20, 1957	+35.92	Mar. 20, 1957	+36.14	Apr. 15, 1957	+35.94	Sept. 5, 1957 <sup>h</sup>	+32.66
25	35.72	25	35.98	20	35.88	23	h33.02
28	35.91	31	35.80	May 25	35.30	Nov. 4	h33.82
Mar. 5	35.88	Apr. 5	36.17	31	35.07	21	h33.98
10	36.09	10	36.18	July 2	33.85	Dec. 19	h34.21
15	35.84						

<sup>h</sup> Tape measurement.Queens County

Q64. American Ice Co. 83d St. and 45th Ave., Elmhurst. Lat 40°44'30", long 73°52'50". Drilled unused artesian well screened in Lloyd sand member of Raritan formation and in bedrock, diam 10 to 8 in, depth 560 ft. Lsd, 34.3 ft above msl. MP, top of casing, 0.50 ft above lsd. Highest water level 3.38 above msl, Apr. 16, 1956; lowest 68.90 below msl, Nov. 2, 1947. Records available: 1947-56. Measurement discontinued.

Mean water level above and below msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	+2.00	+2.57	+3.02	+2.57	e1.69	+0.79	....	....	-1.92	-0.78	-0.75
10	....	2.12	2.49	3.05	2.43	e1.57	.65	....	....	1.76	.58	.69
15	....	2.23	2.60	3.25	2.32	e1.42	....	....	....	1.50	.59	.74
20	....	....	2.78	3.09	2.02	e1.25	....	....	-2.39	1.37	.61	.65
25	+1.91	....	2.90	2.80	1.79	1.15	....	....	2.46	1.28	.58	.64
Eom	....	....	2.96	2.80	1.93	e.96	.08	-2.13	2.21	.92	.52	.51

<sup>e</sup> Estimated.

Q283. City of New York, Dept. of Water Supply, Gas and Electricity. Underhill Ave. and 171st St., Flushing. Lat 40°44'55", long 73°47'45". Drilled unused artesian well in Lloyd sand member of Raritan formation, diam 26 to 12 in, depth 409 ft, screened 309-352, 367-409. Lsd, 27 ft above msl. MP, top of iron plate, 0.37 ft above lsd. Highest water level 5.48 above msl, Apr. 7, 1955; lowest 10.26 below msl, Sept. 3, 1947, Sept. 27, 1951. Records available: 1946-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5, 1956	-3.19	Jan. 30, 1956	-3.09	June 4, 1956	-4.11	Sept. 26, 1956	-5.60
10	3.01	Mar. 3	3.40	July 3	5.87	Oct. 26	5.73
15	2.96	29	3.48	31	5.68	Nov. 30	3.75
20	3.04	May 3	3.00	Sept. 4	6.41	Dec. 21	3.52
25	3.02						

Mean water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	-4.36	-1.74	-2.05	-2.17	-3.96	-7.75	-9.53	-7.29	-6.10	-4.82	-3.52
10	....	1.99	1.85	2.03	2.69	4.62	....	9.36	7.34	5.69	4.95	2.62
15	....	1.27	2.43	....	3.29	5.61	....	9.09	7.20	5.58	4.65	2.62
20	....	.85	2.50	....	3.55	6.64	....	8.84	6.80	5.30	4.38	2.40
25	....	.87	2.75	1.96	3.37	7.74	....	8.78	6.46	4.98	3.92	2.26
Eom	-4.37	.80	2.57	2.15	3.80	7.96	9.28	7.80	6.13	4.87	3.89	1.94

Q1089. City of New York, Dept. of Water Supply, Gas and Electricity. North Conduit Ave. near Long Island RR, Aqueduct. Lat 40°40'00", long 73°49'50". Driven observation water-table well in deposits of late Pleistocene age, diam 2 in, depth 32 ft, screened 30-32. Lsd, 20.5 ft above msl. MP, top of 2-in coupling, 0.01 ft above lsd. Highest water level 4.04 above msl, Sept. 23, 1938; lowest 0.42 below msl, Oct. 17, 1932. Records available: 1911-17, 1932-39, 1941-57.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Q1089--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3, 1956	+2.13	Aug. 31, 1956	+2.02	Feb. 26, 1957	+1.76	July 30, 1957	+1.59
Mar. 5	1.96	Sept. 26	1.92	Mar. 26	1.79	Aug. 23	1.46
28	2.09	Oct. 26	1.78	Apr. 24	1.81	Sept. 24	1.16
May 3	2.11	Nov. 29	1.84	May 28	1.79	Oct. 29	1.07
June 1	2.11	Dec. 20	1.95	June 27	1.73	Nov. 22	.99
29	2.12	Jan. 24, 1957	2.02	July 24	1.01	Dec. 23	1.39
July 31	2.07						

Q1252. City of New York, Dept. of Water Supply, Gas and Electricity. Liberty Ave. and 157th St., Jamaica. Lat  $40^{\circ}42'00''$ , long  $73^{\circ}47'55''$ . Driven observation water-table well in deposits of late Pleistocene age, diam  $1\frac{1}{4}$  in, depth 28 ft, screened 26-28. Lsd, 31.2 ft above msl. MP, top of  $1\frac{1}{4}$ -in coupling, 0.02 ft below lsd. Highest water level 13.92 above msl, Nov. 2, 1948; lowest 4.50 above msl, Sept. 25, 1957. Records available: 1940-57.

Feb. 7, 1956	+7.23	Oct. 1, 1956	+6.58	Mar. 26, 1957	+5.59	Aug. 23, 1957	+4.68
Mar. 5	7.58	26	6.39	Apr. 24	5.74	Sept. 25	4.50
May 3	7.08	Nov. 28	6.41	May 27	5.63	Oct. 29	(f)
June 4	7.31	Dec. 18	6.42	June 26	5.36	Nov. 27	(f)
July 3	7.00	Jan. 24, 1957	6.18	July 25	4.98	Dec. 23	(f)
Sept. 4	6.73	Feb. 26	6.54				

f Dry.

Suffolk County

S1810. City of New York, Dept. of Water Supply, Gas and Electricity. Sagtikos Parkway, Pineaire. Lat  $40^{\circ}46'20''$ , long  $73^{\circ}16'50''$ . Driven observation water-table well in deposits of late Pleistocene age, diam  $1\frac{1}{4}$  in, depth 47 ft, screened 45-47. Lsd, 93.7 ft above msl. MP, top of casing, 0.65 ft below lsd. Highest water level 56.19 above msl, Apr. 29, 1939; lowest 45.24 above msl, Feb. 23, 1933. Records available: 1912-14, 1932-57.

Jan. 26, 1956	+53.50	Aug. 28, 1956	+54.92	Jan. 30, 1957	+52.95	July 3, 1957	+52.63
May 5	53.78	Sept. 28	54.60	Feb. 27	52.65	Aug. 2	51.92
29	53.94	Nov. 5	53.84	Mar. 27	52.49	Sept. 11	50.91
June 22	54.33	28	53.68	Apr. 24	52.39	30	52.69
July 30	54.60	Dec. 17	54.89	May 29	52.61		

S3513. New York State Division of Highways. State Highway 25, Selden. Lat  $40^{\circ}51'45''$ , long  $73^{\circ}02'55''$ . Drilled unused water-table well in deposits of late Pleistocene age, diam 8 in, depth 65 ft, screened 63-65. Lsd, 102.1 ft above msl. MP, top of casing, 0.22 ft below lsd. Highest water level 67.57 above msl, June 20, 1956; lowest 59.86 above msl, Feb. 15, 21, 23, 1948. Records available: 1942-57.

Jan. 24, 1956	+66.57	July 30, 1956	+67.33	Jan. 30, 1957	+65.20	Aug. 1, 1957	+65.00
Feb. 27	66.31	Aug. 28	67.04	Feb. 27	65.08	28	64.65
Mar. 27	66.49	Oct. 1	66.57	Mar. 27	64.87	Sept. 25	64.28
Apr. 27	67.04	Nov. 1	66.20	Apr. 24	65.04	Oct. 25	63.75
May 28	67.52	29	65.85	May 27	65.55	Dec. 4	63.29
June 20	67.57	Dec. 18	65.56	July 3	65.34	19	63.07

S3514. Herman Jurgens. Jericho Turnpike, Commack. Lat  $40^{\circ}50'35''$ , long  $73^{\circ}18'00''$ . Dug unused water-table well in deposits of late Pleistocene age, diam 30 in, depth 95 ft. Lsd, 154.2 ft above msl. MP, top of recorder shelf, 3.89 ft above lsd. Highest water level 72.51 above msl, Feb. 25, 1956; lowest 64.23 above msl, Mar. 18, 26, 1951. Records available: 1942-57. Recording gage removed Apr. 3, 1956.

Mean water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+71.70	+72.20	+72.32	.....	.....	.....	.....	.....	.....	.....	.....	.....
10	71.80	72.25	72.17	.....	.....	.....	.....	.....	.....	.....	.....	.....
15	.....	72.32	72.14	.....	.....	.....	.....	.....	.....	.....	.....	.....
20	72.05	72.33	72.23	.....	.....	.....	.....	.....	.....	.....	.....	.....
25	72.10	72.51	72.25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eom	71.96	72.21	72.26	.....	.....	.....	.....	.....	.....	.....	.....	.....

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 27, 1956	+71.94	Nov. 1, 1956	+71.40	Mar. 27, 1957	+69.79	Aug. 28, 1957	+68.28
May 28	71.88	29	71.23	Apr. 24	69.61	Sept. 24	68.36
June 27	71.85	Dec. 18	70.88	May 27	69.40	Oct. 24	68.38
July 31	71.90	Jan. 30, 1957	70.16	July 3	68.57	Nov. 26	68.07
Aug. 29	71.64	Feb. 27	70.17	Aug. 1	68.30	Dec. 19	68.03
Sept. 25	71.67						

## NEW YORK, SUFFOLK COUNTY

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S3543. City of New York, Board of Water Supply. Suffolk Airport, Westhampton. Lat 40°51'00", long 72°39'00". Drilled observation water-table well in deposits of late Pleistocene age, diam 2 in, depth 58 ft, screened 56-58. Lsd, 64.4 ft above msl. MP, top of casing, 0.04 ft above lsd. Highest water level 20.87 above msl, June 24, 1953; lowest 15.18 above msl, Feb. 27, 1951. Records available: 1907-09, 1942-43, 1947-57.

Date	Water level						
Jan. 25, 1956	+19.26	July 30, 1956	+19.75	Jan. 30, 1957	+17.81	July 30, 1957	+17.88
Feb. 29	18.76	Aug. 29	19.55	Feb. 27	17.68	Aug. 28	17.80
Mar. 28	18.87	Oct. 3	19.18	Mar. 27	17.64	Sept. 25	17.50
Apr. 26	19.46	31	18.87	Apr. 24	17.88	Oct. 28	17.16
May 28	20.04	Nov. 28	18.54	May 28	18.46	Nov. 25	16.84
June 21	20.05	Dec. 20	18.22	July 2	18.39	Dec. 17	16.67

S4271. U. S. Geol. Survey. Long Island Research Farm, Riverhead. Lat 40°57'30", long 72°43'30". Drilled observation water-table well in deposits of late Pleistocene age, diam 4 in, depth 105 ft, screened 100-105. Lsd, 100.3 ft above msl. MP, top of 4-in coupling, 1.14 ft above lsd. Highest water level 11.84 above msl, Apr. 26, 1955; lowest 9.12 above msl, Sept. 10-12, 1950. Records available: 1945-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26, 1956	+11.09	Aug. 20, 1956	+11.13	Nov. 28, 1956	+10.99	July 2, 1957	+9.58
Feb. 29	11.22	27	11.21	Dec. 21	10.86	Aug. 1	9.18
Mar. 30	11.36	28	11.20	Jan. 30, 1957	10.64	28	9.34
Apr. 26	11.50	Sept. 3	11.20	Feb. 27	10.72	Sept. 25	9.64
May 28	11.59	10	11.12	Mar. 27	10.65	Oct. 25	9.80
June 21	11.47	Oct. 4	11.13	Apr. 24	10.52	Dec. 4	9.90
July 30	11.32	31	11.06	May 27	10.44	18	9.91
Aug. 13	11.26						

S5517. Brookhaven National Lab. Upton Rd. and Princeton Ave. Lat 40°51'50", long 72°53'15". Drilled observation water-table well in deposits of late Pleistocene age, diam 4 in, depth 91 ft, screened 85-91. Lsd, 115 ft above msl. MP, top of casing, 0.04 ft above lsd. Highest water level 46.40 above msl, May 28, 1956; lowest 39.60 above msl, Feb. 4-6, 8-9, 1951. Records available: 1948-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 1, 1956	+45.01	Aug. 29, 1956	+45.38	Feb. 27, 1957	+42.99	Aug. 28, 1957	+42.41
27	45.55	Oct. 4	44.67	Mar. 27	42.90	Sept. 25	41.97
Apr. 27	46.21	Nov. 1	44.14	Apr. 24	43.36	Oct. 25	41.54
May 28	46.40	29	43.67	May 27	43.63	Nov. 25	41.02
June 22	46.25	Dec. 21	43.30	July 2	43.21	Dec. 17	40.82
July 30	45.82	Jan. 30, 1957	43.04	30	42.87		

S6434. Brookhaven National Lab. 10th St. and 4th Ave. Lat 40°52'20", long 72°52'35". Rotary drilled observation artesian well in Lloyd sand member of Raritan formation, diam 10 in, depth 1,395 ft, screened 1,312-1,392. Lsd, 85 ft above msl. MP, top of steel plate, 2.02 ft above lsd. Highest water level 34.93 above msl, May 13, 31, 1956; lowest 30.62 above msl, Jan. 23, 1951. Records available: 1949-57. Recording gage removed Oct. 4, 1956.

Noon water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1949

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	.....	.....	.....	.....	.....	+33.34	+33.02	+32.95	+32.61
10	.....	.....	.....	.....	.....	.....	.....	.....	33.18	33.01	32.79	32.27
15	.....	.....	.....	.....	.....	.....	.....	.....	33.33	32.97	32.87	32.38
20	.....	.....	.....	.....	.....	.....	.....	+33.36	.....	32.92	32.87	32.35
25	.....	.....	.....	.....	.....	.....	.....	33.22	33.00	32.76	32.91	31.99
Eom	.....	.....	.....	.....	.....	.....	.....	33.32	33.10	33.13	h32.76	.....
								1950				
5		+31.95	+31.93	+32.00	+31.85	+31.99	+31.79	+31.83	+31.69	+31.38	+31.52	+31.21
10		32.07	31.83	31.77	31.88	31.90	31.66	31.74	31.56	31.58	31.28	31.21
15	+32.12	32.26	31.93	31.92	31.88	31.78	31.63	31.64	31.71	31.30	31.05	31.17
20	32.02	32.17	31.72	31.97	31.82	31.88	31.88	31.83	31.51	31.45	31.33	30.99
25	32.04	32.11	32.08	31.88	31.87	31.94	31.82	31.60	31.45	31.40	31.33	31.16
Eom	32.08	.....	31.84	31.79	31.90	31.76	31.76	31.66	31.37	31.38	31.34	31.10
								1951				
5	+30.90	+30.88	.....	.....	+31.73	+31.80	+32.02	+31.65	+31.57	+31.61	+31.38	+31.40
10	.....	h31.49	.....	h31.49	.....	31.86	31.75	31.72	31.56	31.42	31.46	31.41
15	31.31	.....	.....	31.53	31.48	31.95	31.74	31.72	31.58	31.37	31.54	31.61
20	30.92	.....	.....	31.35	31.65	31.84	31.85	31.70	31.46	31.43	31.37	31.23
25	30.98	.....	.....	.....	31.95	31.92	31.72	31.64	31.55	31.45	31.22	31.21
Eom	32.08	.....	.....	31.53	31.80	31.93	31.79	31.74	31.88	31.45	31.29	31.31

h Tape measurement.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

## S6434--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5, 1952	+31.51	Feb. 5, 1953	+32.22	Feb. 25, 1953	+31.99	May 15, 1953	+33.86
10	31.58	10	32.21	28	32.80	20	33.72
15	31.51	15	32.37	Mar. 5	32.75	25	33.81
Jan. 31, 1953	32.37	20	32.18	May 10	33.69		

1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+33.05	....	+32.84	+32.37	+32.86	+32.92	+32.90	+32.80	....	....	+33.39	+33.43
10	33.03	....	32.93	32.35	32.99	32.80	32.69	32.92	....	....	....	33.62
15	33.00	....	32.89	32.54	32.83	32.77	32.81	32.71	....	....	....	33.84
20	32.94	....	33.00	32.52	32.88	32.78	32.83	32.67	....	....	....	33.63
25	32.87	+33.04	32.72	32.69	32.89	32.90	32.62	32.73	+33.00	+33.06	33.55	33.25
Eom	....	32.79	32.63	32.60	32.82	32.78	32.67	....	32.91	....	33.52	33.47

1955

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+33.49	+33.38	+33.83	+33.76	+34.06	+33.94	+33.70	+33.41	+33.36	....	....	+33.88
10	33.61	33.64	33.91	33.82	33.85	33.96	33.64	33.55	33.17	+33.23	....	33.88
15	33.69	33.53	33.71	33.96	33.81	33.85	33.57	33.53	33.23	....	....	33.94
20	33.61	33.63	33.66	33.81	33.91	33.84	33.47	33.62	33.44	33.36	....	33.81
25	33.56	33.62	33.85	34.04	34.01	33.77	33.53	33.38	33.14	33.39	....	34.14
Eom	33.55	33.84	33.82	33.93	33.90	33.70	33.36	33.40	33.19	33.45	....	34.05

Mean water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Date	Water level	Date	Water level	Date	Water level	Date	Water level
5	....	+34.12	+34.20	+34.49	+34.64	+34.86	+34.69
10	+34.31	34.12	34.01	34.50	34.76	34.83	34.87
15	34.32	34.17	34.11	34.77	34.82	34.83	34.78
20	34.20	34.27	34.29	34.58	34.66	34.71	34.54
25	34.10	34.53	34.43	34.40	34.54	34.90	34.83
Eom	33.97	34.18	34.48	34.63	34.93	34.70	34.64

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1955	+34.15	Feb. 27, 1957	+33.55	July 2, 1957	+33.08	Oct. 25, 1957	+32.48
29	33.97	Mar. 27	33.27	30	32.96	Nov. 25	32.19
Dec. 21	33.80	Apr. 24	33.22	Aug. 28	32.60	Dec. 17	31.92
Jan. 30, 1957	33.35	May 27	33.47	Sept. 25	32.58		

S6455. Brookhaven National Lab. 10th St. and 4th Ave. Lat 40°52'20", long 72°53'35". Rotary drilled observation artesian well in sands of Magothy (?) formation, diam 4 in, depth 962 ft, screened 952-962. Lsd. 84.6 ft above msl. MP, top of casing, 0.56 ft above lsd. Highest water level 41.22 above msl, May 13, 1956; lowest 35.82 above msl, Jan. 13, 1950. Records available: 1949-52, 1954-57. Recording gage removed Oct. 4, 1956.

Noon water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1949

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	....	....	....	....	....	....	+39.36	....	+38.56	+38.10	....
10	....	....	....	....	....	....	....	39.25	+38.76	38.48	38.02	....
15	....	....	....	....	....	....	....	39.15	38.90	38.40	38.03	....
20	....	....	....	....	....	....	....	e39.05	38.73	38.32	38.00	....
25	....	....	....	....	....	....	+39.47	39.00	e38.53	38.15	38.02	+37.31
Eom	....	....	....	....	....	....	39.39	....	38.59	38.32	37.88	37.40

Date	Water level	Date	Water level	Date	Water level	Date	Water level
5	+37.42	+37.06	+37.25	+37.37	+37.28	+37.47	+37.50
10	37.45	37.15	37.12	37.26	37.33	37.54	37.41
15	37.27	37.31	37.22	37.31	37.28	37.50	37.34
20	37.17	37.16	37.11	37.39	37.26	37.52	37.46
25	37.17	37.18	37.28	37.37	37.33	37.57	....
Eom	37.16	37.17	37.20	37.28	37.38	37.48	37.31

1950

Date	Water level	Date	Water level	Date	Water level	Date	Water level
5	+35.90	+36.51	+37.04	+37.57	+37.64	+37.67	+37.18
10	35.83	36.60	37.18	37.47	37.68	37.48	37.19
15	+36.25	35.93	36.87	37.26	37.49	37.73	37.43
20	....	36.22	36.94	37.28	37.60	37.62	37.47
25	....	36.33	36.85	37.45	37.68	37.65	37.34
Eom	35.87	36.29	37.09	37.50	37.58	37.62	37.33

e Estimated.

h Tape measurement.

S6455--Continued.

Day	1952											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+36.96	.....	+37.99	+38.70	+38.93	+39.48	.....	.....	.....	.....	.....	.....
10	36.98	.....	37.95	.....	39.01	39.58	.....	.....	.....	.....	.....	.....
15	37.01	.....	38.17	38.87	39.10	39.55	.....	.....	.....	.....	.....	.....
20	37.15	.....	38.29	38.81	39.19	39.51	.....	.....	.....	.....	.....	.....
25	36.95	+37.79	38.39	38.80	39.26	39.68	.....	.....	.....	.....	.....	.....
Eom	.....	37.90	38.50	38.97	39.29	39.55	.....	.....	.....	.....	.....	.....

Day	1954											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	+38.21	+37.98	+37.94	+38.39	+38.67	+38.59	+38.22	.....	+39.15	+39.27	+39.18
10	.....	38.13	38.07	.....	38.53	38.65	38.42	38.35	.....	39.14	39.16	39.35
15	.....	38.07	38.03	.....	38.52	38.63	38.46	38.15	.....	39.12	39.12	39.53
20	.....	37.91	38.23	.....	38.58	38.65	38.40	38.11	+38.92	39.05	39.18	39.41
25	.....	38.14	37.97	.....	38.65	38.64	38.26	38.17	38.97	39.04	39.22	39.22
Eom	+38.11	37.95	37.98	38.20	38.63	38.51	38.20	.....	38.98	39.26	39.11	39.65

Day	1955											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	+39.73	+39.72	+39.85	.....	+40.13	+39.92	.....	+39.07	+38.86	+38.52	.....	+40.24
10	39.82	39.87	39.86	.....	39.96	39.81	.....	39.00	38.82	38.56	.....	40.18
15	39.89	39.85	39.84	.....	39.95	39.76	.....	39.11	38.60	38.66	+39.83	40.30
20	39.83	39.83	39.76	.....	39.94	39.78	.....	39.08	38.50	38.81	39.98	40.13
25	39.88	39.81	39.86	.....	40.01	39.65	.....	38.93	.....	39.16	40.01	40.33
Eom	39.82	39.93	.....	+40.06	39.90	38.63	+39.12	38.88	.....	39.32	40.03	40.25

Mean water level above msl on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph  
1956

Day	1956											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	+40.12	+40.39	+40.77	+41.04	+41.05	.....	.....	+40.04	.....	.....	.....
10	+40.15	40.12	40.30	40.81	41.13	.....	.....	.....	.....	.....	.....	.....
15	40.00	40.19	40.45	41.08	41.10	.....	.....	.....	.....	.....	.....	.....
20	39.95	40.29	40.51	40.95	41.01	.....	.....	+40.25	.....	.....	.....	.....
25	39.96	40.50	40.59	40.92	40.91	.....	.....	.....	.....	.....	.....	.....
Eom	39.92	40.27	40.64	41.06	41.12	.....	.....	40.11	.....	.....	.....	.....

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 4, 1956	+39.67	Jan. 30, 1957	+38.76	May 27, 1957	+39.11	Sept. 25, 1957	+37.57
Nov. 1	39.50	Feb. 27	38.90	July 2	38.56	Oct. 25	37.42
29	39.17	Mar. 27	38.69	30	38.32	Nov. 25	37.03
Dec. 21	39.09	Apr. 24	39.06	Aug. 28	37.84	Dec. 17	37.06

S6542. Cutchogue Fire Dept. Depot Lane, Cutchogue. Lat 41°01'05", long 72°29'25". Drilled fire-protection water-table well in deposits of late Pleistocene age, diam 6 in, depth 36 ft, screen assumed at bottom. Lsd, 24.4 ft above msl. MP, top of casing, 1.19 ft above lsd. Highest water level 7.89 above msl, May 27, 1953; lowest 3.22 above msl, Nov. 2, 1950. Records available: 1949-57.

Jan. 24, 1956	+5.80	June 26, 1956	+6.71	May 28, 1957	+5.69	Sept. 26, 1957	+3.75
Mar. 1	6.20	Sept. 27	5.44	July 2	4.71	Oct. 24	3.63
30	6.71	Dec. 27	5.33	31	4.24	Dec. 4	3.49
Apr. 30	7.27	Mar. 27, 1957	5.41	Aug. 30	3.89	18	3.69
May 28	7.14	Apr. 24	5.79				

S8836. Southampton Fire Dept. Nugent St., Southampton. Lat 40°53'15", long 72°23'35". Drilled fire-protection water-table well in deposits of late Pleistocene age, diam 8 in, depth 37 ft, screen assumed at bottom. Lsd, 17.4 ft above msl. MP, top of casing, 1.47 ft above lsd. Highest water level 8.88 above msl, Apr. 29, 1953; lowest 5.61 above msl, Jan. 23, 1951. Records available: 1950-57.

Jan. 26, 1956	+6.97	June 21, 1956	+7.79	Mar. 27, 1957	+6.68	Aug. 28, 1957	+6.03
Feb. 29	7.37	Oct. 3	6.91	Apr. 24	6.94	Sept. 25	5.85
Mar. 28	7.73	Dec. 21	6.49	May 28	6.82	Oct. 28	5.80
Apr. 27	8.27	Jan. 30, 1957	6.34	July 1	6.49	Nov. 25	5.75
May 28	7.94	Feb. 27	6.52	30	6.24	Dec. 17	6.07

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## OHIO

By Alvin J. Feulner

The observation-well program was continued in 1956 and 1957 in cooperation with the Ohio Department of Natural Resources, Divisions of Water and Wildlife, the Commissioners of Hamilton County, and the city of Canton. Figure 11 shows the location of observation wells included in this report.

### Well-Numbering System

Wells are designated by abbreviations derived from county names and by serial numbers. The letter "a" after the serial number indicates a well whose record is considered to be an extension of that of the well having the corresponding number. For example, the record for well Al-1a may be used as a continuation of the record for well Al-1.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum.

#### Allen County

Al-1a. Standard Oil Co. Lat 40°42'30", long 84°07'30". Drilled unused artesian well in dolomite, diam 10 in, depth 375 ft. MP, floor of instrument shelter, 1.40 ft above lsd. Highest water level 123.95 below lsd, May 17, 1954; lowest 160.09 below lsd, Aug. 1, 1951. Records available: 1950-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1950

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	.....	.....	.....	.....	.....	152.10	153.93	152.40	.....
10	.....	.....	.....	.....	.....	.....	.....	153.60	.....	153.77	154.03	149.72
15	.....	.....	.....	.....	.....	.....	.....	154.15	154.45	151.36	152.32	152.60
20	.....	.....	.....	.....	.....	.....	.....	150.20	154.37	152.56	151.22	151.51
25	.....	.....	.....	.....	.....	.....	.....	152.78	150.90	152.90	.....	149.02
Eom	.....	.....	.....	.....	.....	.....	.....	152.96	154.85	154.14	.....	150.59

1951

5	153.37	150.76	145.67	147.25	148.15	151.60	155.98	152.28	155.30	155.50	150.45	148.15
10	153.48	151.00	152.40	142.80	150.85	.....	156.15	151.44	153.65	156.25	150.85	148.90
15	152.96	152.85	152.25	151.90	151.10	152.38	.....	153.14	154.30	155.40	149.65	151.05
20	153.32	153.37	152.90	155.50	154.65	152.42	155.68	148.10	154.50	156.40	153.60	151.70
25	152.14	144.85	153.05	155.40	.....	153.41	159.88	154.50	152.50	156.10	149.15	149.55
Eom	150.89	146.15	.....	147.05	152.11	154.78	.....	155.48	154.75	154.10	150.80	153.15

1952

5	153.70	.....	152.00	155.65	156.55	153.85	156.20	156.45	153.70	147.10	153.55	
10	153.15	.....	146.90	.....	156.50	155.70	156.40	150.95	151.95	149.30	153.50	
15	154.05	153.85	143.65	.....	156.60	155.85	156.70	149.55	156.20	153.60	152.10	
20	154.10	147.35	143.45	.....	156.90	155.80	156.85	154.45	155.85	153.95	153.35	
25	153.70	151.40	151.90	.....	155.35	156.50	156.40	154.50	153.65	153.05	151.70	
Eom	150.75	.....	152.45	154.75	154.90	154.00	156.65	156.30	151.65	154.00	149.40	152.55

1953

5	150.00	153.20	152.80	.....	141.45	154.35	.....	155.15	156.60	154.15	155.75	156.00
10	152.70	153.05	148.45	154.20	126.85	154.15	.....	154.55	155.90	156.05	151.55	155.70
15	153.20	149.60	139.05	153.55	140.50	153.55	154.05	155.05	155.70	156.20	152.20	155.25
20	152.05	149.60	150.70	150.85	151.10	150.80	149.65	154.05	155.20	155.00	154.85	154.70
25	151.30	152.40	152.95	150.80	149.90	154.60	153.10	153.50	155.85	154.70	155.55	155.25
Eom	152.85	153.40	152.75	144.35	149.80	155.55	155.50	154.40	155.75	153.45	155.50	156.20



Figure 11. --Location of observation wells in Ohio, 1956-57.

Al-1a--Continued.

Day	1954											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	155.85	155.60	151.45	154.45	136.10	155.90	.....	156.70	.....	156.05	.....	.....
10	155.45	155.45	150.65	154.55	140.45	155.90	156.35	155.70	147.30	152.30	.....	.....
15	155.80	153.40	151.60	154.40	140.35	154.50	156.70	152.95	153.40	156.70	.....	.....
20	156.00	153.50	152.30	153.65	147.15	154.50	155.90	153.55	.....	155.70	.....	.....
25	155.60	151.80	155.75	151.10	155.20	155.95	155.75	152.05	145.50	155.50	.....	.....
Eom	154.25	148.00	155.10	147.10	154.55	155.95	155.95	145.95	155.25	.....	.....	.....
1955												
5	.....	.....	153.75	142.25	154.15	.....	155.00	155.60	154.80	154.70	154.30	155.10
10	.....	.....	154.85	.....	153.60	155.80	155.30	155.30	154.50	152.60	155.00	156.40
15	.....	.....	152.20	152.90	156.20	156.40	155.80	155.90	151.80	153.20	156.30	.....
20	.....	.....	148.85	155.30	.....	.....	155.70	155.90	151.00	153.30	156.60	.....
25	.....	155.50	.....	153.90	154.50	155.30	156.10	156.50	156.00	150.90	155.20	156.30
Eom	.....	.....	.....	155.65	155.60	155.10	155.00	156.50	156.20	152.70	155.70	155.60
1956												
5	155.60	155.20	154.50	154.80	154.60	154.70	157.20	157.60	157.60	157.20	151.90	153.10
10	156.00	155.20	.....	156.40	153.50	157.40	157.30	157.70	157.50	152.60	152.80	154.80
15	154.70	156.00	.....	155.80	157.00	.....	157.60	157.60	157.80	.....	152.80	154.20
20	154.30	156.40	.....	156.90	156.80	.....	157.10	157.50	157.80	150.10	154.40	154.70
25	152.10	156.00	150.20	156.40	157.30	155.70	157.20	157.80	157.60	155.70	154.60	156.00
Eom	153.40	156.10	154.30	156.70	157.00	157.80	157.20	157.70	157.50	153.90	155.90	151.70
1957												
5	154.60	151.80	152.40	156.60	155.20	155.80	.....	.....	.....	146.70	153.80	154.80
10	152.20	151.90	153.80	156.00	155.30	153.00	.....	.....	.....	149.20	155.10	154.60
15	150.70	151.90	153.30	155.80	156.60	.....	.....	.....	140.00	149.90	149.70	154.40
20	154.80	152.40	152.60	155.90	156.00	.....	.....	.....	143.00	150.40	153.10	155.00
25	152.10	152.10	152.30	156.50	156.70	.....	.....	.....	145.20	151.80	155.60	156.50
Eom	150.70	152.10	156.50	156.20	156.20	.....	.....	.....	145.20	152.10	156.20	154.80

Auglaize County

Au-1. C. W. Manchester. Lat 40°33'42", long 83°54'18". Drilled unused artesian well in limestone, diam 4 in, depth 96 ft. MP, floor of instrument shelter, 3.70 ft above lsd. Highest water level 14.33 below lsd, Apr. 11, 1948; lowest 21.58 below lsd, Jan. 26, 1954. Records available: 1946-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	17.32	17.47	16.71	15.81	15.98	16.12	16.33	16.52	17.27	18.11	18.71	19.09
10	.....	17.43	16.40	15.78	16.07	16.27	16.53	16.64	17.45	18.09	18.81	19.09
15	17.32	16.29	15.75	16.27	16.73	16.47	16.72	17.45	18.43	18.92	19.07	.....
20	17.49	17.10	16.26	15.81	16.16	16.42	16.37	17.02	17.56	18.83	18.93	19.06
25	.....	16.94	16.08	15.89	16.17	16.40	16.42	17.04	17.68	18.61	18.98	18.97
Eom	17.51	16.83	16.02	15.96	16.11	16.37	16.51	17.14	17.89	18.60	19.00	18.76

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	18.68	17.91	16.96	16.17	15.92	15.82	15.43	15.88	16.84	17.15	17.18	16.44
10	18.52	17.66	16.83	16.12	15.99	15.77	15.45	15.98	16.88	17.21	17.17	16.24
15	18.55	17.61	16.82	16.19	15.96	15.84	15.47	16.44	16.98	.....	16.91	16.19
20	18.52	17.43	16.72	15.90	16.00	15.63	15.70	16.51	17.08	17.36	16.76	15.93
25	18.32	17.24	16.71	15.88	15.90	15.64	15.65	16.52	17.00	17.32	16.62	15.89
Eom	18.10	16.98	16.94	15.88	16.00	15.35	15.81	16.99	17.03	17.20	16.53	15.69

Belmont County

B-1. City of Martins Ferry. Lat 40°07'12", long 80°42'34". Drilled unused water-table well in gravel, diam 40 in, depth 79 ft. MP, floor of instrument platform, 14.00 ft above lsd. Highest water level 6.45 below lsd, Oct. 16-18, 1954; lowest 38.10 below lsd, Aug. 13, 1951. Records available: 1948-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1951												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	25.02	27.30	22.15	24.30	31.00	35.48	33.49	.....	35.95	36.80	36.90	35.60
10	28.30	.....	30.20	33.62	35.40	34.60	36.47	37.05	36.95	.....	32.50	.....
15	30.42	.....	29.00	24.10	33.00	24.70	34.78	36.22	37.00	36.95	36.85	33.55
20	.....	24.00	30.10	.....	34.81	33.55	36.49	36.15	37.00	37.05	.....	34.60
25	26.73	20.88	29.92	29.55	34.45	35.00	.....	37.17	37.00	37.00	35.45	28.75
Eom	28.63	25.95	30.30	23.87	35.23	32.68	.....	37.28	35.50	36.95	31.90	32.35

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

B-1--Continued.

1952												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	19.90	19.15	34.20	.....	.....	34.60	.....	35.55	36.65	.....	.....	36.35
10	28.20	24.90	34.45	.....	.....	27.80	.....	35.45	35.70	36.65	.....	35.30
15	33.60	31.75	.....	.....	.....	31.15	.....	36.10	36.40	36.85	.....	30.80
20	18.85	.....	.....	.....	26.90	.....	.....	35.35	35.80	35.75	.....	34.20
25	23.00	.....	.....	.....	28.05	.....	.....	35.35	35.80	37.10	33.85	.....
Eom	.....	34.30	.....	.....	.....	35.50	35.80	.....	.....	35.40	.....	.....
1953												
5	.....	32.50	33.80	27.60	33.90	30.30	35.15	36.85	36.05	36.20	36.65	35.90
10	.....	32.90	33.20	30.85	26.50	33.50	36.25	35.40	36.85	36.20	36.55	35.35
15	31.10	31.50	30.20	30.10	32.50	34.45	37.05	36.00	35.90	35.90	37.75	36.05
20	30.10	33.10	30.75	30.95	30.20	35.60	36.50	36.60	35.60	36.45	36.40	35.10
25	.....	31.30	29.35	32.40	27.90	35.40	35.80	36.55	36.20	35.55	35.70	33.90
Eom	28.10	32.75	26.85	33.00	29.85	35.65	35.90	36.05	36.75	36.25	36.30	34.95
1954												
5	36.70	34.80	21.40	32.55	29.05	34.35	35.30	35.55	35.10	32.90	32.75	33.00
10	35.85	36.10	31.85	31.65	31.35	34.90	35.50	34.90	35.70	34.00	32.85	34.30
15	35.80	37.55	30.90	33.45	33.00	34.55	36.15	35.35	36.00	35.05	34.00	33.30
20	35.35	30.30	32.15	24.00	34.10	33.75	36.35	34.90	36.35	21.60	34.50	25.60
25	33.10	31.80	32.65	30.30	35.30	34.55	35.70	34.65	35.25	30.70	33.85	32.45
Eom	30.40	32.80	29.75	25.35	35.15	35.50	36.15	34.90	35.55	31.50	34.10	20.20
1955												
5	23.55	.....	.....	32.30	33.80	36.25	35.30	36.20	35.55	36.15	35.40	33.85
10	25.40	29.65	.....	33.55	34.20	32.50	34.90	36.15	36.00	36.60	37.00	33.25
15	30.80	30.30	.....	32.90	34.00	32.20	35.60	33.60	36.30	35.70	35.80	36.15
20	33.50	29.45	.....	31.80	34.55	34.70	36.70	34.30	36.30	33.85	29.10	35.95
25	34.40	.....	22.60	31.85	34.65	35.15	36.55	35.20	35.70	35.45	31.75	.....
Eom	.....	31.20	27.35	35.70	35.25	35.65	35.60	35.75	35.25	33.60	35.40	.....
1956												
5	35.90	26.55	.....	.....	29.70	27.10	32.50	33.60	33.85	35.50	37.70	36.40
10	36.20	25.30	.....	.....	30.10	.....	32.80	24.20	34.40	34.85	36.60	32.30
15	35.95	28.00	.....	.....	18.70	36.30	33.70	31.20	34.45	35.60	37.90	29.25
20	36.40	23.10	.....	30.25	25.60	34.25	32.60	32.80	33.95	35.85	37.65	30.00
25	37.75	.....	27.90	30.80	31.75	31.00	33.80	33.00	34.15	35.80	35.80	29.00
Eom	34.05	.....	.....	30.70	29.15	32.85	32.50	34.25	34.80	36.00	36.60	31.50
1957												
5	33.00	.....	28.75	24.20	32.35	35.30	34.35	36.00	36.30	35.70	36.35	34.95
10	33.85	.....	31.80	.....	35.25	35.35	34.70	36.10	35.80	35.50	35.95	27.40
15	.....	31.15	24.90	32.95	34.90	35.75	36.50	35.80	35.65	35.95	32.70	.....
20	.....	32.75	27.30	33.90	35.65	35.95	36.45	35.60	35.60	34.10	31.65	.....
25	20.50	33.05	33.60	29.50	33.55	35.50	35.90	36.20	35.45	36.65	35.70	30.65
Eom	.....	33.45	32.45	27.80	34.80	33.70	36.15	36.05	35.55	36.15	34.95	26.90

Butler County

Bu-1. Formerly 25-5. City of Middletown. Columbia Ave., Middletown. Lat 39°32', long 84°25'. Drilled unused artesian well in gravel, diam 8 in, depth 62 ft. MP, top of grating over pump pit, 1.00 ft above lsd. Highest water level 13.25 below lsd, May 4, 1947; lowest 41.10 below lsd, Sept. 25, 1941. Records available: 1941-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	29.25	30.50	25.35	24.75	26.60	26.60	27.75	29.10	30.15	30.89	31.44	31.95
10	29.60	30.05	25.70	24.15	26.75	27.20	27.60	29.70	30.37	30.86	31.45	32.05
15	29.90	28.50	25.75	24.70	27.00	27.55	27.75	29.65	30.60	30.94	31.45	31.87
20	30.35	27.65	26.20	25.50	27.15	27.60	28.15	30.75	30.55	31.20	31.64	31.67
25	30.75	27.30	26.40	25.95	27.25	27.40	28.30	30.17	30.61	31.17	31.61	31.53
Eom	30.75	24.95	26.20	26.15	27.00	27.75	28.75	30.28	30.70	31.44	31.71	31.51
1957												
5	31.61	30.72	29.95	28.90	25.12	23.95	22.53	26.54	29.50	30.28	31.30	30.42
10	31.69	30.81	30.00	22.12	25.73	24.55	22.58	27.30	29.48	30.68	31.24	29.82
15	31.58	30.63	30.10	22.80	26.08	25.26	.....	27.65	29.90	30.78	31.11	.....
20	31.66	30.72	30.39	23.53	26.04	25.11	25.00	28.21	30.07	30.80	30.77	28.69
25	31.20	30.85	30.74	23.66	22.55	25.10	25.54	28.85	30.16	31.03	30.37	25.71
Eom	30.42	30.95	31.03	24.27	23.44	25.10	26.01	29.50	29.90	31.17	30.49	25.03

Bu-3. Formerly 36-13a. American Rolling Mill Co. Crawford St. and South Ave., Middletown. Lat 39°30'00", long 84°23'00". Drilled unused artesian well in gravel, diam 24 in, depth 250 ft. MP, floor of instrument shelter, 1.08 ft above lsd. Highest water level 91.00 below lsd, Dec. 25, 1957; lowest 147.27 below lsd, Apr. 4, 1955. Records available: 1955-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	135.02	126.17	121.82	117.52	111.67	106.57	101.02	99.37	97.67	98.27	100.42	103.00
10	134.62	125.12	123.47	116.62	110.67	106.22	100.22	98.92	97.52	99.02	100.97	103.25
15	134.17	123.07	121.52	115.12	109.87	.....	99.52	98.42	97.32	99.27	100.92	103.30
20	131.07	122.37	120.12	114.32	108.92	103.82	98.92	98.17	97.17	99.62	101.17	103.05
25	129.12	122.22	119.37	113.37	108.07	102.87	98.47	98.02	96.57	99.97	101.42	102.20
Em	127.32	123.92	118.12	112.57	107.02	101.87	98.87	97.82	96.19	100.57	102.75	101.60

1957

5	101.32	102.22	103.12	102.07	100.92	101.77	101.72	99.82	98.82	97.87	95.02	92.12
10	101.72	102.87	103.67	101.47	101.22	101.57	101.72	99.62	98.27	96.77	95.27	91.87
15	101.42	103.62	103.02	100.27	101.57	101.57	100.72	99.42	98.27	96.37	93.47	92.32
20	102.17	103.97	103.72	101.62	101.72	101.47	100.92	99.27	98.27	96.27	94.37	92.37
25	101.92	104.02	102.92	101.52	102.12	101.47	101.07	98.72	98.22	96.12	.....	91.57
Em	101.97	103.62	101.32	99.47	102.02	101.62	100.17	99.37	98.27	93.87	92.47	92.42

Bu-4. Formerly 79-2. Armco Steel Corp. New Miami. Lat 39°26'06", long 84°31'48". Drilled unused artesian well in gravel, diam 26 in, depth 177 ft. MP, floor of instrument shelter, 3.00 ft above lsd. Highest water level 25.77 below lsd, Apr. 11, 1957; lowest 47.95 below lsd, Dec. 28, 1954. Records available: 1949-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1951

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	30.94	.....	31.04	30.01	33.62	35.45	36.88	39.70	40.95	41.25	39.90	40.80
10	31.76	.....	29.48	.....	.....	36.03	37.20	40.92	40.65	41.40	40.00	39.85
15	31.66	29.49	.....	31.26	33.87	35.69	37.00	41.08	40.20	41.75	40.15	.....
20	31.50	33.24	30.10	30.07	34.11	37.07	38.02	41.08	.....	41.85	.....	.....
25	33.00	29.28	29.23	30.86	33.92	37.63	39.00	41.17	41.10	41.90	.....	.....
Em	33.75	30.28	30.00	32.39	34.10	37.06	39.14	41.48	40.40	41.90	40.40	36.50

1952

5	.....	30.15	35.40	34.75	.....	.....	38.60	.....	41.70	39.60	39.85	.....
10	33.85	30.65	35.90	34.30	36.05	.....	38.80	.....	41.85	39.95	39.70	41.80
15	34.30	.....	33.80	34.00	.....	.....	39.65	41.15	41.90	41.60	39.75	41.80
20	33.25	33.10	.....	34.15	.....	37.50	37.65	41.20	41.50	42.05	40.30	42.15
25	33.65	33.40	34.10	33.50	.....	37.50	39.00	41.40	40.00	42.10	40.90	42.35
Em	28.15	34.15	33.95	33.80	37.30	.....	41.75	39.55	41.20	41.50	42.30	.....

1953

5	42.20	41.50	42.00	.....	43.25	41.50	40.50	41.40	42.80	41.70	42.70	43.65
10	41.90	41.00	42.00	42.10	42.85	40.85	39.90	41.50	42.30	41.75	42.70	44.05
15	43.15	40.50	40.75	42.60	44.10	39.50	39.80	41.95	41.90	.....	42.90	44.05
20	42.45	41.05	40.40	41.75	43.95	39.85	39.50	42.20	41.45	.....	43.15	44.20
25	41.25	42.00	40.25	41.65	41.30	40.30	40.60	42.35	41.50	.....	43.40	44.40
Em	41.35	42.50	40.75	42.80	40.35	40.70	.....	42.85	41.50	.....	43.35	44.70

1954

5	45.00	.....	43.65	41.95	41.25	42.20	43.90	45.10	44.70	46.50	47.10	47.00
10	45.30	43.30	43.15	41.50	41.85	.....	44.10	44.90	45.20	45.95	47.35	46.80
15	43.60	43.35	40.90	41.85	.....	44.85	45.30	45.60	46.05	47.30	47.10	.....
20	46.85	43.50	43.50	39.90	42.25	.....	43.95	45.60	45.80	45.40	47.40	47.50
25	44.65	43.75	43.35	40.35	43.05	41.70	43.10	46.20	45.90	45.55	47.55	47.60
Em	43.75	43.70	43.00	41.05	42.40	42.30	44.45	45.35	46.30	47.05	47.50	.....

1955

5	46.45	46.30	.....	35.10	41.40	.....	40.15	44.65	43.10	44.90	44.35	36.90
10	45.05	45.10	.....	35.05	42.00	.....	40.60	43.55	44.55	44.90	44.65	37.10
15	45.00	.....	.....	37.80	.....	.....	40.45	.....	44.75	45.15	42.60	37.20
20	45.30	.....	36.10	39.15	.....	.....	40.55	43.70	45.00	45.30	38.00	37.65
25	45.60	.....	34.50	.....	43.15	39.45	41.80	43.35	44.95	44.40	36.40	38.05
Em	.....	.....	34.30	40.35	.....	39.85	43.85	43.00	44.80	44.10	36.25	38.60

1956

5	38.95	39.45	35.10	30.85	31.55	31.05	31.70	31.55	34.20	34.50	33.70	36.05
10	38.90	38.50	34.70	30.55	31.85	31.65	31.35	32.70	34.35	34.75	33.40	35.95
15	38.15	37.40	34.80	31.20	.....	32.25	31.30	33.20	34.25	35.15	34.45	36.00
20	38.45	36.20	34.35	31.65	.....	31.85	31.80	33.70	34.50	34.50	35.00	36.05
25	39.60	.....	33.90	31.45	32.15	31.85	31.55	34.00	34.90	33.10	35.05	36.15
Em	39.80	34.80	32.65	31.55	31.65	31.45	31.15	34.40	35.00	33.10	35.50	36.50

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Bu-4--Continued.

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	36.95	35.90	32.95	31.35	30.15	.....	28.65	31.70	32.70	32.10	32.80	33.70
10	36.50	34.90	33.20	26.80	30.70	.....	.....	31.60	32.30	32.30	32.70	33.00
15	36.20	33.60	33.50	27.40	.....	.....	.....	31.60	32.05	32.60	33.40	32.65
20	36.25	.....	33.60	28.25	.....	30.40	31.45	32.00	32.00	32.80	33.25	32.45
25	36.60	.....	33.75	28.60	27.60	30.45	31.85	32.00	31.70	32.75	31.95	30.00
Eom	35.75	33.20	33.15	29.45	.....	29.45	31.45	32.65	31.90	32.60	33.15	30.05

Bu-5. Formerly 85-7a. City of Hamilton. Lat  $39^{\circ}25'$ , long  $84^{\circ}32'$ . Drilled unused artesian well in gravel, diam 18 in., depth 110 ft (previously reported as 180 ft). MP, platform base, 5.71 ft above lsd. Highest water level 15.00 below lsd, May 24-25, 1957; lowest 42.05 below lsd, Sept. 16-17, 1954. Records available: 1954-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	34.95	34.85	30.60	18.80	19.15	18.90	18.30	19.10	26.50	21.70	21.65	23.20
10	34.85	34.10	30.30	25.15	19.30	19.15	18.40	19.65	21.40	21.95	21.40	23.05
15	33.60	33.05	30.45	19.25	23.30	19.30	18.40	20.00	21.20	22.25	22.10	23.25
20	34.30	31.30	24.80	19.25	19.20	18.40	18.75	20.30	21.50	21.95	22.50	23.30
25	35.15	31.80	22.50	19.25	19.60	18.30	20.60	20.55	21.70	21.90	22.60	23.40
Eom	34.90	30.55	21.20	19.25	19.00	18.20	18.55	20.85	21.90	21.45	22.90	23.65

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	24.05	.....	21.00	18.35	17.45	.....	16.30	23.85	24.95	20.20	20.75	20.55
10	23.95	.....	21.20	15.35	17.85	.....	21.45	19.75	20.10	20.30	20.85	19.70
15	26.30	.....	21.40	16.10	17.95	.....	21.15	19.20	20.00	20.45	20.70	19.85
20	23.90	.....	21.55	16.35	17.85	17.55	23.00	19.55	20.00	20.65	.....	18.80
25	29.85	.....	22.80	16.50	.....	17.75	18.75	19.90	19.95	25.65	.....	17.70
Eom	.....	21.10	21.35	17.15	.....	16.95	18.95	25.50	20.05	20.85	.....	17.75

Bu-8. Formerly B-40. City of Hamilton. Lat  $39^{\circ}22'$ , long  $84^{\circ}31'$ . Drilled unused artesian well in gravel, diam 6 in., depth 200 ft. MP, top of casing, 4.00 ft above lsd. Highest water level 38.20 below lsd, June 8, 1947; lowest 71.70 below lsd, Oct. 24, 1944. Records available: 1944-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1951												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	45.00	.....	40.20	40.20	41.20	43.40	45.75	49.40	51.90	53.85	55.70	56.65
10	43.90	42.35	40.50	40.30	41.60	43.65	46.45	49.90	52.20	54.20	55.80	56.85
15	42.60	41.80	40.25	40.15	42.20	44.00	47.10	50.20	52.65	54.40	56.00	56.70
20	42.10	41.00	40.20	40.50	42.20	44.40	47.75	50.60	53.00	54.65	56.40	56.15
25	42.10	40.20	40.15	40.45	42.60	44.95	48.25	51.05	53.25	55.15	56.50	56.05
Eom	.....	40.45	40.00	40.85	43.10	45.05	48.85	51.40	53.55	53.50	56.60	54.70

1952												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	53.35	46.65	45.50	42.40	42.30	43.55	45.55	49.30	51.80	.....	55.05	56.55
10	52.40	45.75	45.05	42.60	42.75	43.90	46.25	49.65	52.05	53.90	55.50	56.80
15	51.65	45.50	44.35	42.05	42.95	44.35	47.00	50.00	52.30	54.15	55.70	57.05
20	51.45	45.10	43.85	41.85	43.20	44.85	47.40	.....	52.80	54.65	55.95	57.10
25	50.85	45.15	42.85	41.85	43.30	45.15	48.15	.....	53.00	54.70	56.15	57.40
Eom	48.50	44.90	42.60	42.05	43.05	44.90	.....	51.30	53.25	54.95	56.60	57.60

1953												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	57.80	55.50	55.30	54.55	54.40	53.15	53.10	52.75	54.20	55.50	57.15	58.35
10	57.50	55.65	54.85	54.55	54.55	52.95	52.25	53.00	54.40	55.75	57.30	.....
15	57.15	55.35	54.80	54.60	54.65	52.60	52.05	53.15	54.60	56.05	57.35	58.75
20	56.50	55.30	54.75	54.55	54.55	52.65	52.00	53.40	54.85	56.30	57.55	58.65
25	56.35	55.20	54.60	54.25	53.80	52.85	52.40	53.65	55.05	56.55	57.80	58.95
Eom	55.80	55.40	55.40	54.25	53.10	53.05	52.55	53.95	55.50	56.85	58.10	59.30

1954												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	59.30	60.45	61.60	62.30	62.95	63.65	64.05	64.45	64.80	65.25	65.80	66.55
10	59.60	60.70	61.60	62.45	63.10	63.65	64.20	64.50	64.75	65.15	66.05	66.50
15	59.65	60.85	62.05	62.45	63.15	63.70	64.40	64.45	64.90	65.35	65.90	66.50
20	59.85	60.95	62.05	62.85	63.25	63.75	64.35	64.60	64.95	65.40	66.05	66.65
25	60.15	61.10	.....	62.80	63.30	63.85	64.40	64.50	65.00	65.40	66.25	66.80
Eom	60.40	61.30	62.35	62.90	63.45	64.00	64.40	64.70	65.20	65.70	66.60	66.80

1955												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	66.65	66.70	64.65	60.90	59.45	59.10	59.60	60.40	61.25	62.00	62.00	61.55
10	66.80	66.40	63.55	60.85	59.35	59.25	57.80	60.45	61.45	62.10	61.75	61.80
15	66.75	66.30	63.25	60.40	59.35	59.45	59.75	60.70	61.55	61.75	61.95	.....
20	66.95	66.25	63.15	60.05	59.15	59.30	60.00	60.80	61.70	62.05	62.10	.....
25	66.85	66.05	62.25	59.90	59.25	59.50	60.10	61.00	62.00	.....	61.95	.....
Eom	66.90	65.30	61.25	59.85	59.35	59.50	59.25	61.25	62.15	.....	61.95	.....

## OHIO, CLARK COUNTY

97

Bu-8--Continued.

1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	61.20	58.30	.....	.....	53.15	.....	52.00	53.85	55.33	56.97	58.45
10	.....	60.75	58.20	.....	.....	53.25	.....	52.35	53.85	55.75	57.12	58.73
15	.....	60.50	58.00	.....	.....	53.15	.....	52.55	54.02	55.80	57.50	58.82
20	.....	60.05	57.55	.....	.....	52.95	51.75	52.80	54.52	56.04	57.62	59.00
25	.....	59.00	57.00	.....	53.45	.....	51.75	53.13	54.67	56.40	57.90	59.32
Eom	.....	59.00	.....	.....	53.05	.....	52.00	53.35	54.99	56.49	58.25	59.54

1957

5	59.69	60.45	59.78	59.15	55.27	52.99	52.68	53.74	55.21	56.71	58.33	59.40
10	60.17	60.25	59.90	57.41	55.09	53.10	52.87	53.77	55.50	57.03	58.82	59.15
15	59.93	60.10	59.85	56.11	55.08	53.22	52.77	54.01	55.51	57.18	58.64	59.42
20	60.16	60.11	59.74	55.50	55.14	53.11	52.98	54.35	55.81	57.64	58.97	59.04
25	60.20	59.75	59.65	55.25	54.16	53.21	53.21	54.60	56.17	57.75	59.00	58.53
Eom	60.15	59.96	59.85	55.20	53.21	52.94	53.33	54.93	56.37	58.04	59.27	57.67

Bu-9. Formerly 180. Fox Paper Co. Crescentville. Lat  $39^{\circ}18'05''$ , long  $84^{\circ}26'18''$ .

Drilled unused artesian well in gravel, diam 26 in, depth 90 ft. MP, top of metal plate covering well, 1.50 ft above lsd. Highest water level 3.77 below lsd, Jan. 27, 1949; lowest 24.40 below lsd, Mar. 16, 1954. Records available: 1938-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	10.23	7.89	6.38	5.14	.....	.....	6.90	11.50	14.81	16.84	18.30	19.42
10	10.59	7.32	6.73	5.10	.....	.....	7.56	12.62	15.15	17.31	18.36	19.63
15	11.08	6.99	6.85	5.41	.....	.....	8.05	13.27	15.27	17.22	18.45	19.22
20	11.75	6.29	6.63	6.66	.....	11.26	7.55	13.90	15.92	17.40	18.76	19.15
25	12.05	6.15	6.46	.....	.....	7.76	8.10	14.48	16.09	17.85	18.73	19.17
Eom	9.66	6.25	6.65	.....	.....	7.90	10.38	14.80	16.48	17.71	19.10	19.18

1957

5	19.20	11.24	7.95	5.65	7.55	6.87	.....	.....	16.16	17.62	19.01	11.08
10	19.50	9.94	7.92	4.70	8.15	7.74	.....	.....	16.59	18.00	19.57	9.74
15	17.26	9.15	8.40	5.73	9.40	9.50	.....	.....	16.46	18.06	18.81	9.52
20	16.66	9.12	8.63	5.75	6.75	.....	.....	15.00	16.74	18.58	12.50	7.77
25	12.67	9.00	8.75	6.40	5.46	.....	.....	15.25	17.13	18.50	12.26	7.43
Eom	11.55	7.95	8.94	6.95	6.31	.....	.....	15.80	17.32	18.72	11.36	6.40

Champaign County

Ch-1. State of Ohio. Lat  $40^{\circ}06'36''$ , long  $83^{\circ}48'00''$ . Drilled observation water-table well in gravel, diam 6 in, depth 45 ft. MP, floor of instrument shelter, 4.50 ft above lsd. Highest water level 1.43 below lsd, Jan. 17, 1950; lowest 9.56 below lsd, Dec. 22, 1954. Records available: 1948-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 18, 1956	9.23	Aug. 1, 1956	8.23	Jan. 16, 1957	9.33	Aug. 28, 1957	8.48
Feb. 15	7.95	28	8.64	Mar. 11	8.87	Sept. 25	8.55
Mar. 15	7.54	Sept. 26	8.90	Apr. 10	5.83	Oct. 1	8.70
Apr. 11	7.25	Oct. 1	8.93	May 7	7.93	23	8.88
May 9	7.95	24	9.05	June 5	7.65	Nov. 20	8.42
June 6	7.71	Nov. 19	9.17	July 3	7.64	Dec. 19	6.96
July 5	7.97	Dec. 19	8.50	31	7.96		

Clark County

Cl-2. City of Springfield. Lat  $39^{\circ}55'50''$ , long  $83^{\circ}51'12''$ . Drilled unused artesian well in gravel, diam 6 in, depth 74 ft. MP, floor of instrument shelter, 2.00 ft above lsd. Highest water level 0.20 below lsd, Jan. 15, 1950; lowest 7.67 below lsd, Sept. 21, 1955. Records available: 1949-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	7.11	6.30	5.82	4.30	6.01	5.88	6.13	6.89	7.18	7.23	7.20	7.27
10	7.15	5.18	5.31	5.50	6.20	6.30	6.65	7.00	7.23	7.24	7.21	6.65
15	7.19	5.65	5.57	5.82	5.95	6.57	6.62	7.03	7.35	7.23	7.24	7.03
20	....	5.30	5.83	6.13	6.20	6.44	6.65	7.05	7.39	7.27	7.26	7.12
25	....	5.96	5.50	6.19	6.38	6.63	6.80	7.13	7.33	7.25	7.21	7.02
Eom	6.70	4.98	5.54	5.70	5.35	6.75	6.71	7.16	7.30	7.20	7.26	7.08

Cl-2--Continued.

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	7.15	6.90	6.65	2.43	6.21	e6.05	4.86	6.67	7.15	....	....	6.78
10	7.18	6.13	6.80	3.94	6.40	....	5.61	6.82	7.19	....	....	5.79
15	e7.20	6.61	6.85	5.22	5.65	....	6.18	6.91	....	....	....	6.43
20	e7.15	6.91	6.90	5.05	5.55	....	6.48	6.97	....	....	6.22	4.00
25	6.10	6.95	6.96	5.71	4.70	....	6.35	7.02	....	6.90	6.66	5.17
Eom	6.80	6.18	6.88	6.00	5.90	4.78	6.65	7.11	....	7.02	6.50	5.34

e Estimated.

## Coshocton County

Cs-2. Coshocton Waterworks. Coshocton. Lat  $40^{\circ}17'56''$ , long  $81^{\circ}52'36''$ . Drilled unused water-table well in gravel, diam 6 in, depth 40 ft. MP, floor of instrument shelter, 8.50 ft above lsd. Highest water level 0.43 below lsd, Feb. 21, 1951; lowest 15.20 below lsd, Sept. 4, 1953. Records available: 1949-57. Water levels affected by pumping. Recording gage installed June 24, 1952.

	Date	Water level		Date	Water level		Date	Water level		Date	Water level
May	20, 1949	9.55		Jan. 15, 1950	1.25		Aug. 28, 1950	10.87		Aug. 22, 1951	13.53
	29	8.91		22	1.45		Sept. 3	10.02		27	13.34
June	5	8.08		29	3.40		11	10.59		Sept. 2	12.50
	18	8.97		Feb. 5	5.55		17	10.30		9	13.12
July	3	8.09		26	.56		Oct. 8	9.58		15	12.97
	15	9.48		Mar. 5	1.60		23	10.35		22	13.12
	22	8.08		12	4.46		Nov. 5	10.21		30	12.50
	31	9.30		19	5.83		19	10.01		Oct. 10	13.02
Aug.	7	9.63		26	4.43		Dec. 3	4.41		21	13.08
	14	10.01		Apr. 2	5.68		10	1.04		28	13.08
	21	10.49		9	4.56		17	5.61		Nov. 4	13.00
	28	9.94		16	6.98		24	8.01		25	9.00
Sept.	4	9.95		23	6.50		30	6.50		Dec. 6	12.55
	11	10.41		30	6.85		Jan. 7, 1951	.60		9	9.65
	18	10.83		May 6	7.50		14	2.45		10	8.90
	25	10.50		14	8.00		21	3.43		29	8.60
Oct.	2	10.23		21	8.13		28	4.40		Jan. 14, 1952	10.51
	16	10.79		28	4.90		Feb. 11	7.11		20	3.80
	24	10.64		June 4	7.10		21	.43		29	4.20
	30	10.40		11	8.01		25	.70		Feb. 14	4.00
Nov.	6	10.20		18	8.50		Mar. 5	3.60		24	10.05
	13	9.96		25	8.81		13	6.40		Mar. 9	10.55
	20	10.61		July 2	9.45		July 1	8.80		14	2.10
	27	10.70		8	9.50		8	9.10		22	6.50
Dec.	4	10.81		15	9.78		15	7.70		29	7.10
	11	10.76		23	10.11		22	8.10		Apr. 13	7.30
	18	9.50		30	10.49		29	9.20		29	7.60
	25	8.92		Aug. 6	10.30		Aug. 3	9.65		May 4	10.20
Jan.	1, 1950	5.96		13	9.36		12	12.01		11	11.10
	8	1.07		20	9.80		20	10.41		17	12.10

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1952

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	....	....	....	....	....	12.80	14.10	14.40	....	14.95	....
10	....	....	....	....	....	....	13.65	14.00	14.70	14.70	14.80	14.35
15	....	....	....	....	....	....	14.00	13.70	14.80	14.75	14.70	14.20
20	....	....	....	....	....	....	13.65	13.90	14.20	14.50	14.60	14.50
25	....	....	....	....	....	13.90	14.10	13.80	....	....	14.35	14.05
Eom	....	....	....	....	....	13.65	13.95	14.55	14.80	15.00	14.10	14.60

1953

5	14.55	12.40	12.15	12.40	13.30	12.85	12.85	14.30	14.95	14.80	14.85	14.55
10	14.40	13.15	12.30	13.00	11.25	13.35	14.00	13.70	14.95	14.95	14.95	14.60
15	13.20	12.40	12.10	12.50	12.30	13.65	14.50	14.10	14.85	14.95	14.75	14.65
20	....	....	....	12.00	10.80	14.05	13.95	14.45	14.35	14.95	15.05	14.60
25	....	12.20	12.60	12.45	9.55	14.40	13.45	14.65	15.10	14.85	14.80	14.15
Eom	11.50	12.60	12.95	12.95	11.20	14.20	14.20	14.85	15.00	14.80	14.60	14.35

1954

5	14.40	....	13.57	10.71	10.50	13.57	14.06	14.28	14.49	14.37	14.10	14.10
10	14.55	....	12.88	10.87	11.50	13.50	13.73	14.29	14.68	14.00	14.25	14.40
15	....	14.35	12.05	11.17	11.97	13.85	14.44	14.46	14.54	13.55	14.28	14.33
20	14.60	13.82	12.85	8.70	12.85	13.64	14.49	14.39	14.45	12.12	14.32	13.83
25	14.20	14.11	12.83	9.08	13.50	13.77	14.01	14.42	14.59	13.39	14.29	13.88
Eom	13.40	14.32	9.50	9.64	13.44	13.50	14.54	14.41	14.65	13.87	14.17	11.90

## OHIO, FAYETTE COUNTY

99

Cs-2--Continued.

1955

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	11.95	13.63	7.60	10.35	12.47	13.52	12.94	14.16	14.07	14.26	14.07	12.69
10	10.95	12.30	7.46	11.51	13.17	13.53	12.60	14.30	14.93	13.91	14.03	....
15	12.33	11.50	6.24	11.83	12.73	13.55	13.23	14.29	14.77	14.05	14.05	13.56
20	13.08	11.61	8.09	11.63	13.07	13.50	12.90	14.56	14.96	13.96	10.48	....
25	13.48	7.47	6.17	10.93	13.40	13.48	13.56	14.50	14.93	14.03	11.05	13.34
Eom	.....	8.50	7.95	11.50	13.32	13.59	13.55	14.78	14.18	14.01	12.55	13.70

1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	13.85	12.15	6.65	9.63	9.20	7.00	11.33	11.65	12.46	13.89	13.85	13.96
10	14.02	9.45	8.35	10.83	8.75	9.82	10.85	11.08	13.10	13.77	14.00	13.10
15	13.77	8.86	6.96	11.83	8.80	12.22	11.95	11.70	13.45	13.80	14.13	12.86
20	14.32	8.25	6.57	11.90	9.55	11.05	12.93	12.18	13.45	14.05	13.89	13.31
25	....	10.85	8.00	12.22	11.27	9.95	13.11	12.72	13.58	14.08	....	12.84
Eom	13.00	7.10	9.10	10.51	7.41	9.08	9.95	13.32	13.80	14.12	13.92	13.45

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	12.39	12.03	8.40	10.76	11.25	7.26	13.40	14.35	13.93	14.14	13.65
10	13.95	12.20	12.55	5.74	12.30	11.50	9.65	13.65	14.37	14.28	13.93	9.64
15	....	11.90	11.45	5.87	9.71	11.86	10.35	13.70	13.35	14.32	14.05	11.20
20	....	12.70	12.29	6.85	9.61	12.09	12.62	13.60	14.27	13.65	13.43	10.91
25	....	13.05	12.65	7.57	7.88	11.30	12.92	13.37	11.59	14.28	13.34	8.08
Eom	11.65	12.50	12.55	8.10	10.33	6.50	13.15	14.35	12.90	14.27	13.00	9.50

Fairfield County

F-1. C. E. Howdyshell. West Rushville. Lat 39°46'06", long 82°26'42". Drilled unused artesian well in sandstone, diam 4 in, depth 110 ft. MP, floor of instrument shelter, 4.00 ft above lsd. Highest water level 7.44 below lsd, Apr. 4, 1951; lowest 18.80 below lsd, Mar. 6, 1954. Records available: 1946-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	17.11	17.47	13.75	9.91	9.98	.....	10.62	.....	14.75	15.18	16.02	16.66
10	17.20	17.10	13.06	9.66	9.83	10.03	10.03	.....	.....	15.35	16.13	16.71
15	17.26	16.60	12.14	9.68	9.81	10.44	10.44	.....	.....	15.46	16.24	16.71
20	17.34	15.83	11.56	9.92	9.92	10.73	10.73	.....	14.85	15.59	16.39	16.74
25	17.50	15.00	11.06	10.06	10.22	10.63	10.63	.....	14.91	15.70	16.43	16.67
Eom	17.64	14.40	10.37	10.10	10.23	10.46	10.46	.....	15.09	15.84	16.53	16.58

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	16.57	15.70	13.20	12.58	10.94	11.76	12.98	14.45	15.65	16.40	16.96	17.16
10	16.49	15.38	12.95	11.83	e11.20	21.11	13.25	14.67	15.80	16.52	17.05	17.09
15	16.41	14.62	12.82	11.00	11.56	11.84	13.52	14.88	15.90	16.66	17.08	16.91
20	16.33	13.91	12.65	10.71	11.82	12.18	13.88	15.11	16.03	16.72	17.08	16.59
25	16.20	13.59	12.61	10.54	12.02	12.48	14.07	15.29	16.12	16.77	17.12	16.23
Eom	15.96	13.34	12.67	10.57	11.93	12.70	14.26	15.53	16.28	16.85	17.12	15.22

e Estimated.

Fayette County

Fa-1. Martha Slagle. Near Jasper Mills. Lat 39°32'09", long 83°31'50". Drilled unused artesian well in limestone, diam 5 in, depth 78 ft. MP, floor of instrument shelter, 3.30 ft above lsd. Highest water level 5.23 below lsd, Jan. 28, 1949; lowest 12.85 below lsd, Jan. 17, 19, 1954. Records available: 1946-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	8.40	7.95	6.65	6.40	6.90	7.30	7.45	8.15	8.35	8.80	9.15	9.40
10	8.35	7.50	6.60	6.30	6.95	7.60	7.50	8.10	8.50	8.95	9.20	9.25
15	8.30	7.30	6.55	6.35	7.00	7.65	7.65	8.05	8.50	9.00	9.35	9.10
20	8.35	7.10	6.50	6.65	7.20	7.50	7.70	8.20	8.50	9.10	9.30	8.90
25	8.45	6.80	6.40	6.85	7.35	7.30	7.65	8.30	8.60	9.10	9.25	8.85
Eom	8.35	6.75	6.35	6.90	7.10	7.50	7.75	8.40	8.85	9.10	9.25	8.60

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	8.90	7.65	6.65	6.30	6.75	6.65	6.75	7.75	8.50	8.60	8.70	8.30
10	8.45	7.25	6.60	6.25	6.80	6.70	6.80	7.80	8.50	8.70	8.60	6.85
15	8.20	6.95	6.55	6.20	7.00	6.90	7.10	7.95	8.65	9.00	8.25	6.70
20	8.10	6.90	6.60	6.20	6.95	7.20	7.85	8.70	8.40	8.85	7.85	6.40
25	7.95	7.10	6.70	6.25	6.90	7.10	7.30	8.65	8.30	8.65	7.50	6.25
Eom	7.65	6.80	6.75	6.40	7.15	6.80	7.35	9.00	8.50	8.65	7.35	6.05

Franklin County

Fr-3. R. Hann. Lat  $39^{\circ}51'18''$ , long  $82^{\circ}57'36''$ . Drilled test water-table well in gravel, diam 12 in, depth 60 ft. MP, floor of instrument shelter, 3.43 ft above lsd. Highest water level 2.18 below lsd, Jan. 27, 1952; lowest 13.08 below lsd, Sept. 29, Oct. 1, 1954. Records available: 1946-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1951

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	5.99	10.94	8.68	9.89	10.54	11.40	.....	.....	12.39	.....	12.37	.....
10	.....	.....	9.64	9.57	10.89	.....	11.73	.....	12.39	.....	12.11	.....
15	8.57	7.93	8.67	8.79	.....	11.41	.....	12.26	12.33	.....	.....	.....
20	.....	7.04	....	10.18	.....	11.57	.....	12.32	12.42	.....	.....	11.69
25	10.03	8.94	9.58	9.85	11.02	11.07	.....	12.34	.....	12.35	.....	10.56
Eom	10.62	.....	.....	10.40	11.20	11.16	12.07	12.37	12.44	12.39	.....	8.25

1952

5	9.07	6.77	10.93	.....	10.87	.....	.....	12.43	.....	12.73	.....	.....
10	10.18	9.37	11.12	.....	11.09	.....	.....	12.45	.....	12.67	.....	.....
15	10.66	10.35	9.50	.....	11.27	.....	12.03	12.48	.....	12.70	12.65	.....
20	9.33	10.67	.....	.....	.....	12.17	12.49	.....	.....	.....	.....	.....
25	10.26	.....	8.87	7.50	.....	.....	.....	12.55	12.65	.....	.....	.....
Eom	8.85	10.78	.....	10.22	.....	12.37	.....	12.70	.....	.....	.....	.....

1953

5	.....	11.65	11.00	12.05	12.02	.....	12.01	12.00	12.85	12.92	12.92	12.94
10	.....	12.05	11.45	11.95	11.44	12.37	12.45	12.37	12.88	12.86	12.91	12.91
15	12.05	11.50	11.35	11.75	11.93	12.36	12.69	12.47	12.90	12.93	12.90	12.83
20	11.35	.....	11.55	11.50	11.20	12.53	11.40	12.65	12.90	12.94	12.88	12.92
25	11.70	11.65	11.85	11.60	11.21	12.67	11.98	12.75	12.93	12.91	12.83	12.90
Eom	11.20	11.85	12.05	11.80	12.02	12.74	12.34	12.82	12.95	12.85	12.90	12.92

1954

5	12.98	12.57	11.91	11.33	11.55	12.29	12.75	12.75	12.88	12.90	12.81	12.73
10	12.99	12.72	11.74	11.42	11.73	12.46	12.80	12.60	12.98	12.82	12.78	12.77
15	13.02	12.82	12.15	11.82	11.90	12.63	12.86	12.79	13.04	12.63	12.81	12.76
20	12.98	12.45	12.27	11.01	12.17	11.71	12.88	12.81	13.03	12.58	12.77	12.67
25	12.58	12.30	12.02	10.70	12.36	12.33	12.59	12.81	13.05	12.73	12.76	12.75
Eom	12.29	12.42	.....	11.56	12.50	12.63	12.82	12.69	13.08	12.77	12.64	11.60

1955

5	11.72	12.70	8.35	11.35	12.07	.....	12.65	12.64	12.85	12.85	12.73	12.33
10	11.45	11.40	.....	11.65	12.20	.....	11.85	12.72	12.92	12.82	12.76	12.50
15	12.05	11.17	10.86	11.76	12.10	.....	12.17	12.68	12.88	12.81	12.80	12.63
20	12.35	10.64	11.25	11.84	12.32	.....	12.25	12.77	12.94	12.80	11.98	12.73
25	12.50	9.48	.....	11.50	12.35	12.42	12.48	12.55	12.81	12.84	11.86	12.77
Eom	12.70	9.67	10.62	11.77	12.39	12.57	12.57	12.80	12.76	12.85	12.34	12.79

1956

5	12.83	11.24	11.19	8.40	10.32	10.35	10.58	11.05	12.11	12.43	12.43	12.59
10	12.84	10.72	9.31	10.15	10.71	10.90	10.46	11.32	12.27	12.49	12.49	12.20
15	12.85	11.10	10.35	10.61	10.77	11.11	10.95	11.45	12.35	12.50	12.54	12.31
20	12.86	10.44	10.28	10.86	11.03	10.90	11.29	11.77	12.37	12.51	12.53	.....
25	12.88	11.40	9.89	10.95	11.41	10.52	11.24	11.95	12.43	12.46	12.50	.....
Eom	12.02	10.49	10.17	10.69	9.32	10.98	10.99	12.11	12.49	12.41	12.55	.....

1957

5	12.47	12.12	11.72	3.50	11.04	10.79	10.70	11.86	12.14	12.37	12.47	12.27
10	12.49	11.50	11.72	7.07	11.42	11.07	11.05	11.96	12.29	12.39	12.32	11.12
15	12.52	11.65	11.62	9.90	10.72	11.14	11.26	12.02	12.10	12.40	12.19	11.86
20	12.62	12.00	11.62	8.84	10.65	11.52	11.65	12.06	12.26	12.40	11.80	10.60
25	11.24	12.17	11.84	10.25	8.80	11.41	11.87	12.10	12.22	12.27	12.17	10.88
Eom	12.04	11.61	11.49	10.77	10.46	9.75	11.72	12.13	12.30	12.42	12.15	10.55

Fr-10. State of Ohio. Ohio State University Farms. Lat  $40^{\circ}01'00''$ , long  $83^{\circ}02'18''$ .

Drilled unused artesian well in gravel, diam 4 in, depth 75 ft. MP, floor of instrument shelter, 4.00 ft above lsd. Highest water level 37.75 below lsd, Apr. 14, 1951; lowest 48.20 below lsd, Oct. 7, 1954. Records available: 1944-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	47.15	47.05	46.05	44.45	43.80	43.40	44.15	44.70	45.60	46.10	46.25	46.25
10	47.05	46.85	46.00	44.30	43.60	43.60	44.25	45.70	46.15	46.05	46.25	46.25
15	47.10	46.65	45.80	43.75	43.70	43.75	44.40	45.10	45.60	46.10	46.15	46.20
20	47.10	46.55	45.70	44.20	43.70	43.80	44.50	45.15	45.65	46.20	46.25	46.25
25	47.20	46.30	45.30	44.20	43.70	43.95	44.65	45.30	45.75	46.10	46.05	46.15
Eom	47.40	46.30	44.90	44.15	43.35	44.20	44.70	45.50	45.90	46.00	46.10	46.15

Fr-10--Continued.

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	46.25	46.30	45.95	44.90	44.45	44.05	44.65	45.35	46.05	46.40	46.45	46.40
10	46.45	46.25	46.00	45.15	44.45	e44.10	44.85	45.45	46.15	46.50	46.65	46.25
15	46.25	46.15	45.85	45.10	44.50	44.35	44.95	45.60	46.05	46.45	46.30	46.50
20	46.40	46.20	45.70	44.70	44.35	44.40	45.05	45.75	46.10	.....	46.35	46.00
25	46.20	46.05	45.65	44.65	44.25	44.50	45.15	45.70	46.20	.....	46.40	46.25
Eom	46.15	45.95	e45.70	44.60	44.15	44.60	45.20	46.05	46.25	46.45	46.45	45.90

e Estimated.

Fr-11. City of Columbus. Nelson Park. Lat  $39^{\circ}58'30''$ , long  $82^{\circ}56'42''$ . Drilled unused artesian well in gravel, diam 6 in, depth 85 ft. MP, floor of instrument platform, 3.00 ft above lsd. Highest water level 0.20 above lsd, Feb. 14, 1950; lowest 35.75 below lsd, Dec. 21, 1957. Records available: 1949-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	31.30	30.90	28.50	28.75	27.40	29.30	30.50	30.90	.....	32.90	32.95	33.00
10	31.60	31.05	29.65	29.25	28.70	28.70	30.60	31.45	32.05	32.85	33.30	32.75
15	31.60	29.70	29.80	28.50	28.70	30.30	29.95	31.55	32.30	32.70	33.60	29.90
20	32.20	30.50	29.10	28.35	27.80	29.80	30.95	31.15	32.60	32.90	.....	32.40
25	31.50	30.60	29.10	28.25	28.65	30.00	31.10	30.95	32.55	33.15	32.35	30.30
Eom	31.20	28.70	28.75	27.15	29.50	30.60	31.00	31.10	32.45	33.15	33.30	31.70

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	31.75	30.60	31.10	.....	27.45	30.85	.....	33.25	34.60	34.20	.....	33.45
10	31.60	30.30	31.05	29.50	27.80	30.75	31.80	33.05	34.45	35.05	.....	32.60
15	31.00	30.60	32.30	29.30	29.95	.....	31.70	33.80	e34.55	34.65	.....	34.80
20	30.95	31.35	.....	30.35	29.90	.....	33.25	33.90	e34.55	32.60	.....	35.70
25	30.85	31.10	31.45	29.15	30.20	.....	33.25	31.80	34.60	33.40	33.70	.....
Eom	30.70	32.75	.....	27.50	30.85	.....	33.30	34.25	34.40	33.70	33.30	.....

e Estimated.

Fulton County

Fn-1. City of Delta. Lat  $41^{\circ}35'05''$ , long  $84^{\circ}00'12''$ . Drilled unused artesian well in gravel, diam 8 in, depth 130 ft. MP, floor of instrument platform, 1.40 ft above lsd. Highest water level 61.83 below lsd, Oct. 18, 1946; lowest 66.10 below lsd, Jan. 8, 1947. Records available: 1946-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	63.94	64.02	63.65	63.71	63.98	64.00	63.96	63.80	64.15	64.17	64.25	64.03
10	63.86	63.85	64.03	63.87	63.93	64.00	63.88	63.95	63.36	64.50	64.05	64.06
15	63.87	64.05	64.23	63.07	63.83	64.00	63.96	63.96	63.90	64.17	63.72	64.00
20	63.76	63.93	64.28	64.02	64.17	63.90	63.96	64.08	64.05	64.11	64.06	64.12
25	64.01	63.35	64.15	64.16	64.40	63.93	63.84	64.17	64.02	64.24	63.77	63.96
Eom	64.45	63.91	63.93	64.20	63.63	63.90	64.05	63.80	64.10	63.95	63.81	63.65

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	64.10	64.30	63.95	63.50	63.98	63.88	63.75	64.07	64.10	64.12	64.05	64.00
10	64.35	63.85	63.90	63.90	63.75	63.83	64.11	63.91	64.10	64.15	64.46	63.66
15	64.10	64.05	63.85	64.20	63.87	63.90	64.02	63.90	63.85	64.11	63.66	64.15
20	64.35	64.25	63.80	63.90	63.75	63.87	63.99	64.14	63.78	64.30	63.65	63.56
25	64.20	63.95	63.90	63.85	63.96	63.80	64.13	63.95	63.94	64.00	63.90	64.38
Eom	64.10	63.95	64.20	64.01	63.95	63.70	63.85	64.23	64.10	64.00	63.79	63.98

Greene County

Gr-1. City of Xenia. Lat  $39^{\circ}44'30''$ , long  $83^{\circ}56'12''$ . Drilled unused artesian well in gravel, diam 30 in, depth 77 ft. MP, floor of instrument shelter, 4.50 ft above lsd. Highest water level 2.45 above lsd, Jan. 27, 1952; lowest 13.85 below lsd, Sept. 4, 1953. Records available: 1944-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	7.25	6.30	5.95	4.20	5.75	6.20	6.50	7.30	7.75	8.10	8.05	8.40
10	7.40	5.80	5.60	5.05	5.95	6.60	6.90	7.60	7.90	8.15	8.10	7.20
15	7.50	5.75	5.60	5.50	6.10	6.75	7.05	7.60	8.00	8.40	8.30	7.60
20	7.95	5.05	6.00	5.85	6.30	6.45	7.10	7.70	8.00	8.30	8.40	7.80
25	8.10	5.60	5.50	6.10	6.50	6.90	7.25	7.75	8.15	8.25	8.25	7.70
Eom	7.20	5.50	5.35	5.85	6.00	7.05	7.20	7.95	8.15	8.30	8.40	7.80

Gr-1--Continued.

Day	1957											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	8.00	7.65	6.80	1.35	5.80	5.75	6.45	5.45	7.60	7.70	7.40	6.95
10	7.90	6.35	7.00	3.90	6.15	5.85	5.75	6.90	7.85	7.65	7.00	6.00
15	7.85	6.75	6.95	4.85	6.05	6.15	6.20	7.10	7.35	7.75	6.85	6.40
20	8.15	7.00	7.00	4.90	5.80	6.15	6.55	7.20	7.60	7.65	6.25	4.60
25	7.15	7.15	7.05	5.20	5.00	5.90	6.40	7.30	7.30	7.30	6.80	5.25
Eom	7.65	6.50	7.05	5.55	5.60	4.80	6.75	7.60	7.50	7.40	6.80	5.25

Hamilton County

H-1. R. Weber. Lat  $39^{\circ}12'$ , long  $84^{\circ}47'$ . Drilled test artesian well in gravel, diam 6 in, depth 124 ft. MP, floor of instrument platform, 2.70 ft above lsd. Highest water level 13.15 below lsd, Feb. 15, 1950; lowest 25.30 below lsd, Dec. 21-28, 1954. Records available: 1949-57.

## Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	21.50	.....	19.60	.....	19.95	19.55	19.85	21.35	22.59	23.42	24.06	24.46
10	21.65	.....	19.35	.....	20.15	19.95	20.55	21.60	22.77	23.60	24.12	23.75
15	21.85	.....	19.20	.....	20.35	20.25	20.80	21.80	22.90	23.70	24.20	24.02
20	22.00	.....	19.25	.....	20.60	19.95	20.80	21.97	23.01	23.80	24.25	24.15
25	.....	.....	19.35	19.75	20.70	20.20	21.00	22.22	23.18	23.87	24.25	24.14
Eom	.....	19.15	19.65	19.70	18.90	20.50	21.15	22.27	23.33	23.99	24.36	24.27

## 1957

5	24.38	23.08	21.83	17.60	20.10	19.43	19.42	21.39	22.25	23.02	23.59	22.46
10	24.31	21.67	21.84	18.37	20.31	19.73	20.08	21.61	22.42	23.14	23.58	21.62
15	e24.05	22.02	21.82	19.34	20.25	19.72	20.47	21.40	22.52	23.25	23.24	21.76
20	24.16	22.16	21.81	19.37	19.50	20.01	20.74	21.84	22.67	23.30	22.54	19.17
25	23.14	22.19	21.86	19.60	18.28	20.35	20.94	21.84	22.69	23.34	22.64	20.14
Eom	23.24	21.50	21.71	19.80	19.32	18.70	21.12	22.05	22.88	23.49	22.43	20.02

e Estimated.

H-2. Leo Willheim. Lat  $39^{\circ}18'$ , long  $84^{\circ}39'$ . Drilled unused artesian well in gravel, diam 6 in (previously reported as 7 in), depth 89 ft. MP, floor of instrument shelter, 8.97 ft above lsd. Highest water level 4.41 below lsd, Apr. 6, 1957; lowest 21.75 below lsd, Feb. 5-6, 1955. Records available: 1952-57. Water levels affected by pumping.

## Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	17.75	17.60	13.50	11.45	15.35	14.90	16.35	17.10	18.20	18.90	19.20	.....
10	17.85	16.95	13.65	11.80	15.75	15.60	16.10	17.50	18.35	18.85	19.35	19.85
15	18.00	15.65	14.15	13.25	15.95	15.95	16.50	17.60	18.55	18.95	19.40	19.40
20	18.25	14.55	14.35	14.35	16.25	16.00	16.55	17.75	18.50	19.15	19.65	19.40
25	18.70	14.45	14.55	14.85	16.55	15.85	16.65	17.95	18.65	19.15	19.75	19.20
Eom	18.50	12.45	14.35	15.20	15.55	16.25	16.75	18.15	18.80	19.25	19.75	19.25

## 1957

5	19.25	19.36	19.20	7.20	.....	13.30	10.85	15.63	17.00	17.03	17.40	16.81
10	19.65	19.70	19.60	6.55	15.45	14.40	11.35	16.03	17.00	17.07	17.51	15.91
15	19.75	19.61	19.95	9.60	15.57	14.90	13.40	16.03	16.83	17.28	17.25	16.13
20	19.95	19.93	20.05	11.85	15.16	14.50	15.12	16.36	16.80	17.55	16.65	15.12
25	19.20	20.05	19.95	12.17	8.75	14.75	15.25	16.80	16.78	17.45	16.58	11.88
Eom	19.00	19.95	20.14	.....	11.95	14.05	15.35	16.88	16.87	17.35	16.80	12.08

H-5. E. I. du Pont de Nemours Co. Lat  $39^{\circ}09'$ , long  $84^{\circ}49'$ . Drilled unused water-table well in gravel, diam 10 in, depth 122 ft. MP, floor of instrument shelter, 1.00 ft above lsd. Highest water level 37.68 below lsd, Apr. 13, 1957; lowest 74.50 below lsd, Sept. 10-11, 1957. Records available: 1956-57. Water levels affected by pumping.

## Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	.....	57.05	52.45	63.75	63.30	67.10	69.50	71.70	73.40
10	.....	.....	.....	.....	56.50	56.20	63.90	63.05	67.45	69.85	72.60	72.45
15	.....	.....	.....	.....	57.00	62.90	65.50	59.85	68.50	69.95	73.20	68.75
20	.....	.....	.....	45.70	.....	64.05	65.40	64.80	67.25	70.40	73.60	58.15
25	.....	.....	.....	54.50	57.80	62.35	65.00	65.35	68.40	70.50	73.10	61.70
Eom	.....	.....	.....	56.95	56.45	59.90	62.00	67.70	68.90	72.40	73.10	61.80

H-5--Continued.

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	65.75	46.50	57.80	62.55	58.80	68.00	65.05	72.65	.....	72.05	73.85	72.10
10	68.50	49.35	60.10	43.40	63.90	67.60	66.45	72.60	74.50	73.65	73.65	65.70
15	59.55	42.70	60.20	40.20	65.95	67.75	68.55	73.15	74.10	73.75	73.50	61.80
20	66.00	56.50	61.65	51.20	66.55	67.85	70.35	73.55	73.90	74.10	70.65	64.55
25	64.35	61.60	63.10	53.25	61.95	69.80	71.25	73.90	73.55	73.80	69.80	59.30
Eom	55.30	61.90	63.70	55.70	66.45	67.45	72.15	.....	73.75	73.65	71.80	53.00

H-6. Formerly 207-3. Village of Glendale. Glendale Waterworks. Mosteller and Sharon Rds. Lat 39°16', long 84°25'. Drilled unused artesian well in gravel, diam 8 in, depth 167 ft. MP, top of recorder platform, 5.45 ft above lsd. Highest water level 13.35 below lsd, Apr. 29, 1939; lowest 77.65 below lsd, Dec. 31, 1954. Records available: 1938-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	65.65	65.00	65.05	.....	61.10	63.00	.....	.....	.....	.....	67.00
10	.....	68.05	67.30	62.90	.....	61.00	61.80	.....	.....	63.75	.....	64.00
15	.....	66.55	67.10	61.10	.....	63.80	60.65	.....	.....	62.80	.....	66.50
20	.....	66.05	64.95	63.75	.....	61.75	63.00	.....	.....	65.00	.....	.....
25	.....	62.25	63.65	62.45	61.85	61.85	61.55	.....	.....	.....	.....	.....
Eom	67.15	66.05	65.25	.....	62.40	63.00	.....	.....	.....	.....	.....	.....

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	65.40	66.00	65.10	.....	.....	.....	.....	62.70	66.00	63.00	63.20	65.10
10	67.20	64.40	64.40	.....	.....	.....	.....	61.80	64.40	64.00	64.90	65.00
15	65.30	67.70	69.20	.....	.....	.....	63.80	63.20	63.50	64.40	65.40	62.70
20	65.80	67.10	66.50	.....	.....	.....	61.50	65.10	64.20	62.30	64.50	64.60
25	68.20	64.90	64.90	.....	.....	.....	63.00	63.40	.....	64.80	64.80	63.40
Eom	67.90	66.50	.....	.....	.....	62.60	65.60	60.30	65.60	65.20	62.30	.....

H-7. Formerly 216-E. Electric Auto-Lite Co. Jimson Rd., Lockland. Lat 39°14'56", long 84°26'20". Drilled unused artesian well in gravel, diam 6 in, depth 180 ft. MP, top of pipe, 5.00 ft above lsd. Highest water level 42.93 below lsd, Apr. 9, 1941; lowest 87.30 below lsd, Nov. 4-5, 1955. Records available: 1941-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	85.85	85.75	85.80	85.60	85.35	84.81	84.48	83.95	84.15	84.25	84.67	84.81
10	85.65	85.75	86.10	85.75	85.10	84.74	84.47	84.00	84.25	84.56	84.48	84.97
15	85.90	85.95	86.05	84.95	85.05	84.61	84.50	84.05	83.95	84.22	84.48	84.78
20	86.00	86.00	86.15	85.85	85.25	84.46	84.47	84.12	84.27	84.28	84.63	84.87
25	85.95	.....	85.90	85.75	85.28	84.48	84.27	84.26	84.15	84.51	84.53	84.86
Eom	86.35	86.05	85.75	85.60	84.65	84.65	84.26	84.05	84.15	84.17	84.63	84.64

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	84.83	85.18	85.15	85.12	85.60	85.18	84.97	84.72	84.51	84.61	84.76	84.81
10	85.10	84.75	85.36	85.77	85.35	85.23	85.12	84.35	84.61	84.72	85.23	84.68
15	84.81	85.10	85.50	85.83	85.35	85.35	84.85	84.31	84.40	84.60	84.45	84.95
20	85.11	85.23	85.42	85.54	85.30	85.14	84.87	84.50	84.44	84.92	84.73	84.34
25	84.85	84.87	85.30	85.50	85.64	85.05	84.95	84.28	84.66	84.61	84.69	85.10
Eom	84.92	84.97	85.70	85.55	85.35	85.05	84.59	84.58	84.59	84.60	84.75	84.65

H-9. Formerly 241-3. Gardner-Richardson Co. South Cooper Ave., Lockland. Lat 39°14', long 84°27'. Drilled unused artesian well in gravel, diam 10 in, depth 168 ft. MP, top of instrument platform, 2.76 ft above lsd. Highest water level 104.70 below lsd, Jan. 30, 1939; lowest 136.80 below lsd, Nov. 9, 1947. Records available: 1938-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	120.05	120.00	120.65	120.40	120.60	120.32	120.11	119.70	120.26	120.46	120.28	119.85
10	119.90	120.25	.....	120.75	120.70	120.39	120.07	119.67	120.35	120.63	.....	120.10
15	120.00	120.50	.....	120.45	120.69	120.25	120.08	119.60	120.25	120.21	.....	.....
20	120.05	120.55	120.70	120.90	120.83	120.05	120.00	119.69	120.45	120.31	.....	.....
25	120.10	120.30	.....	120.82	120.82	120.11	119.90	120.19	120.39	120.45	.....	.....
Eom	120.60	120.55	120.50	120.89	120.27	120.30	119.95	120.18	120.44	119.90	.....	.....

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	119.55	119.80	119.40	118.92	118.88	118.47	118.42	118.47	118.25	118.55	118.40	118.10
10	120.00	119.40	119.50	119.37	118.64	118.56	118.64	118.18	118.36	118.46	118.77	117.79
15	119.50	119.60	119.45	119.24	118.83	118.66	118.47	118.22	118.18	118.23	118.10	118.08
20	119.85	119.70	119.35	119.10	118.62	118.36	118.63	118.35	118.34	118.54	118.24	117.57
25	119.70	119.32	119.20	119.00	118.87	118.32	118.58	118.13	118.60	118.34	118.35	118.11
Eom	119.48	119.40	119.51	118.92	118.57	118.43	118.27	118.37	118.57	118.31	118.20	117.65

H-11. Formerly 270-T-7. Procter & Gamble Co. Vine St., Ivorydale. Lat  $39^{\circ}10'$ , long  $84^{\circ}29'$ . Drilled unused artesian well in sand and gravel, diam 6 in, depth 151 ft. MP, top of 6-in coupling, 2.10 ft above lsd. Highest water level 108.95 below lsd, Dec. 20, 1957; lowest 129.72 below lsd, Oct. 25, 1948 (previously reported as 129.70 below lsd, Oct. 6, 1947). Records available: 1939-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	112.80	112.55	112.55	112.25	112.20	112.10	111.90	111.84	111.66	111.53	111.41	
10	112.85	112.65	112.65	112.45	112.20	112.15	112.00	111.85	111.85	111.73	111.51	111.50
15	112.85	112.60	112.50	112.00	112.15	112.10	112.00	111.84	111.56	111.55	111.40	111.30
20	112.75	112.65	112.60	112.55	112.35	112.05	112.00	111.82	111.62	111.45	111.50	111.43
25	112.80	112.05	112.40	112.50	112.30	112.00	111.95	111.80	111.70	111.50	111.41	111.24
Eom	112.50	112.65	112.45	112.35	112.10	112.15	111.95	111.66	111.68	111.31	111.36	111.12
1957												
5	111.20	.....	110.93	110.47	110.64	110.48	110.29	110.21	109.95	109.87	109.70	109.48
10	111.20	.....	110.90	110.83	110.54	110.42	110.41	110.15	110.03	109.87	109.80	109.38
15	111.14	.....	110.90	110.92	110.50	110.45	110.27	110.13	109.97	109.83	.....	109.56
20	111.26	.....	110.70	110.73	110.30	110.43	110.34	110.15	109.88	109.82	.....	109.13
25	111.06	110.73	110.75	110.65	110.60	110.37	110.33	109.91	110.00	.....	.....	109.64
Eom	110.98	110.70	110.95	110.68	110.56	110.22	110.17	110.12	109.99	.....	.....	109.33

#### Hancock County

Ha-2. Maplehurst Farms. Formerly R. E. Ascham. Lat  $40^{\circ}57'00''$ , long  $83^{\circ}46'00''$ . Drilled unused water-table well in limestone, diam 6 in, depth 27 ft. MP, floor of instrument shelter, 3.50 ft above lsd. Highest water level 2.88 above lsd, Mar. 22, 1948; lowest 7.65 below lsd, Nov. 16-17, 1952. Records available: 1947-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	5.20	3.70	1.80	1.80	2.90	2.50	3.00	3.10	3.85	5.30	5.80	6.20
10	5.35	2.55	1.40	2.20	1.85	2.90	3.15	3.25	4.40	5.40	5.80	3.70
15	5.45	2.45	2.10	2.40	1.85	3.15	3.15	3.05	4.55	5.45	5.85	3.75
20	5.60	2.50	2.30	2.80	2.50	2.40	3.25	2.95	4.65	5.50	5.90	3.80
25	5.75	2.55	1.50	2.90	2.35	1.80	3.40	3.30	4.90	5.60	5.80	3.50
Eom	3.75	2.05	2.05	2.85	1.80	2.55	2.85	3.50	5.10	5.60	6.00	3.40
1957												
5	3.60	2.35	2.40	0.25	2.80	2.80	1.55	3.45	4.45	4.95	3.50	2.95
10	...	1.80	2.70	.70	2.95	2.95	2.20	3.55	5.00	5.25	3.20	1.90
15	3.95	2.40	2.75	1.60	2.25	3.05	2.80	4.05	5.10	5.40	2.65	2.70
20	4.60	2.75	2.80	1.35	1.75	3.05	3.10	4.55	4.45	5.20	2.75	1.00
25	2.20	2.60	2.90	1.95	2.15	3.15	3.30	4.55	3.65	3.20	3.05	1.95
Eom	2.75	1.45	3.00	2.40	2.80	1.60	....	4.85	4.55	3.45	2.70	2.05

#### Jefferson County

Je-1. Steubenville Pottery Co. Lat  $40^{\circ}24'30''$ , long  $80^{\circ}36'40''$ . Drilled unused water-table well in gravel, diam 8 in, depth 104 ft. MP, floor of instrument shelter, 3.50 ft above lsd. Highest water level 30.60 below lsd, Mar. 6-7, 1956; lowest 47.85 below lsd, Dec. 12, 1947. Records available: 1947-50, 1952-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1947												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	.....	.....	43.90	43.33	44.25	44.20	44.42	44.12	43.93
10	.....	.....	.....	.....	.....	38.39	43.70	.....	44.54	46.15	43.90	45.80
15	.....	.....	.....	.....	45.50	43.58	43.83	.....	.....	46.22	43.95	44.89
20	.....	.....	.....	.....	42.78	44.55	44.27	45.08	44.45	46.07	43.98	44.95
25	.....	.....	.....	.....	42.57	43.32	44.30	44.45	44.65	44.40	45.74	44.75
Eom	.....	.....	.....	.....	43.90	43.34	44.10	44.50	44.45	44.05	.....	46.35
1948												
5	44.93	.....	44.58	.....	.....	44.28	.....	.....	.....	.....	.....	.....
10	45.67	.....	.....	.....	.....	44.68	.....	.....	.....	.....	.....	.....
15	46.43	.....	45.17	.....	45.85	.....	44.17	.....	.....	.....	.....	.....
20	44.82	.....	43.80	35.05	.....	.....	44.02	.....	.....	.....	.....	.....
25	44.63	43.00	36.77	.....	.....	.....	45.40	43.69	.....	.....	.....	.....
Eom	.....	.....	.....	.....	.....	44.16	.....	.....	.....	.....	.....	.....

Je-1--Continued.

1949												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	.....	.....	44.17	45.20	.....	44.53	.....	.....	.....
10	.....	45.42	.....	.....	.....	.....	44.56	.....	45.00	.....	.....	.....
15	45.48	45.04	.....	.....	.....	45.12	.....	44.97	.....	.....	44.36	.....
20	.....	42.02	43.77	.....	44.88	43.95	46.23	.....	.....	.....	.....	45.60
25	.....	.....	.....	.....	45.44	45.25	46.12	45.44	.....	.....	.....	45.54
Eom	.....	.....	.....	.....	45.70	45.58	.....	44.48	.....	44.64	.....	.....
1950												
5	.....	.....	38.76	44.67	.....	.....	45.50	43.98	44.17	.....	.....	.....
10	.....	.....	44.55	39.95	44.30	.....	43.81	44.10	43.82	.....	.....	.....
15	.....	39.95	.....	.....	.....	.....	43.67	.....	44.62	.....	.....	.....
20	.....	40.44	.....	43.75	.....	.....	43.78	43.88	44.42	44.15	.....	.....
25	44.98	.....	.....	.....	.....	.....	44.36	44.40	45.46	.....	.....	.....
Eom	.....	.....	34.30	.....	44.27	44.58	44.26	44.31	44.26	.....	.....	.....
1952												
5	.....	.....	.....	.....	.....	.....	.....	43.75	43.85	43.95	44.50	.....
10	.....	.....	.....	.....	.....	.....	43.50	43.80	43.85	44.00	44.70	.....
15	.....	.....	.....	.....	.....	.....	.....	43.75	43.95	44.50	45.40	.....
20	.....	.....	.....	.....	.....	.....	43.55	43.90	44.00	.....	44.55	.....
25	.....	.....	.....	.....	.....	.....	43.55	43.85	44.05	44.75	.....	.....
Eom	.....	.....	.....	.....	.....	.....	43.10	43.80	43.95	44.00	44.50	.....
1953												
5	44.50	.....	45.40	.....	44.80	43.35	43.55	45.05	45.30	44.95	44.25	43.95
10	44.25	45.15	.....	.....	41.85	46.00	43.70	45.25	45.30	44.00	44.20	43.95
15	46.25	45.40	.....	.....	44.55	43.90	43.55	43.80	45.10	44.00	43.80	44.70
20	44.95	45.20	45.25	45.70	44.60	43.55	44.90	44.05	44.00	44.05	43.95	43.50
25	45.85	45.70	44.60	.....	43.50	43.40	44.10	43.95	44.30	43.65	44.75	43.65
Eom	.....	45.30	.....	.....	43.70	43.55	44.90	44.90	44.45	44.65	44.00	43.95
1954												
5	43.95	43.85	38.75	44.15	44.75	43.35	43.20	44.50	43.55	44.30	43.40	43.50
10	43.60	44.95	45.40	45.90	44.85	43.65	44.00	43.90	44.00	43.75	44.35	43.75
15	43.80	44.70	44.60	46.40	43.30	44.35	44.25	43.55	44.55	44.35	44.20	44.55
20	44.10	45.45	44.60	40.25	44.15	43.20	43.50	44.00	44.60	34.80	43.30	42.70
25	47.20	47.30	45.15	44.95	44.30	43.35	43.50	44.50	43.60	42.40	43.35	44.75
Eom	45.25	45.65	44.30	42.60	43.25	43.50	44.75	44.00	43.95	42.70	44.45	38.90
1955												
5	38.70	43.15	34.00	43.70	44.00	43.35	44.70	44.50	43.60	43.95	43.85	45.00
10	41.45	43.60	34.10	42.80	43.90	44.85	43.55	44.55	43.60	44.60	44.40	44.75
15	44.95	44.75	36.80	43.25	43.25	44.90	44.55	45.05	44.05	43.85	43.95	44.50
20	44.15	44.35	41.00	43.60	44.40	44.35	44.50	44.05	44.00	44.25	42.85	43.95
25	43.35	39.15	38.50	46.35	43.65	43.80	44.70	43.95	43.80	44.35	45.60	43.50
Eom	44.20	40.85	44.00	42.70	44.70	43.50	43.50	44.50	44.05	44.80	45.30	43.80
1956												
5	43.85	41.40	41.15	38.35	43.85	42.25	44.50	43.65	43.90	44.00	45.15	43.90
10	43.95	39.05	31.05	36.35	44.10	43.20	43.70	37.95	45.10	44.30	44.10	45.00
15	43.55	41.20	34.60	41.05	37.00	43.25	43.70	43.30	43.70	44.20	44.20	43.40
20	43.80	39.05	39.10	44.20	39.80	44.30	45.20	44.05	44.10	43.60	44.70	43.60
25	44.30	42.80	42.00	45.00	43.55	44.60	44.65	43.50	44.35	44.05	44.05	43.50
Eom	44.00	36.50	40.70	45.55	43.40	43.65	45.05	44.05	43.40	44.40	44.35	45.20
1957												
5	43.50	42.50	44.60	40.80	43.20	43.60	44.15	44.00	44.40	44.15	43.95	43.95
10	44.40	43.40	45.35	.....	43.90	44.50	44.35	43.90	44.05	44.00	44.20	42.85
15	44.00	41.55	45.45	.....	44.05	43.45	43.85	44.00	44.25	44.00	44.20	44.40
20	43.35	46.00	44.80	41.15	44.40	43.65	43.55	44.10	44.35	44.25	44.20	44.50
25	38.60	47.00	44.65	43.45	43.50	43.75	43.85	44.05	44.15	44.60	44.30	44.80
Eom	41.50	45.30	43.75	42.60	44.10	44.25	44.30	44.30	44.25	44.00	44.05	42.55

Knox County

K-1. City of Mount Vernon. Lat 40°23'45", long 82°30'05". Drilled unused artesian well in gravel, diam 8 in, depth 90 ft. MP, floor of instrument shelter, 3.50 ft above lsd. Highest water level 1.90 above lsd, Mar. 19, 1948; lowest 13.05 below lsd, Aug. 30, 1955. Records available: 1946-57. Water levels affected by pumping.

## K-1--Continued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	8.60	7.20	7.50	6.10	7.80	7.60	7.55	9.15	10.00	9.65	9.60	9.45
10	8.75	9.00	7.20	7.15	7.35	8.65	8.90	10.50	8.75	9.75	6.50	7.70
15	8.40	9.30	7.30	6.75	7.45	10.65	8.60	9.70	8.85	8.65	9.40	8.80
20	9.05	....	7.90	7.00	7.15	8.70	8.80	9.15	8.70	9.30	8.90	8.95
25	8.65	9.15	5.50	6.65	10.00	8.55	10.65	8.70	9.15	8.90	7.65	7.10
Eom	....	8.15	7.45	6.95	7.30	9.10	9.15	9.80	10.05	9.60	9.60	8.90

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	8.65	....	....	....	8.65	5.85	10.65	9.75	9.55	9.65	8.30
10	....	8.95	....	7.50	9.20	7.10	8.65	12.05	10.90	9.50	8.95	8.35
15	8.00	9.45	9.10	6.25	7.95	7.65	8.70	11.85	8.15	10.30	9.70	8.25
20	7.90	10.65	....	7.20	6.20	8.70	9.75	10.70	10.55	7.85	9.85	7.20
25	9.10	....	....	....	7.00	8.00	9.30	8.85	9.50	9.00	8.50	6.40
Eom	7.95	....	....	....	8.75	6.15	10.85	10.45	9.10	8.75	8.20	6.85

Lake County

L-1. City of Mentor. Lat  $41^{\circ}41'00''$ , long  $81^{\circ}22'03''$ . Drilled unused water-table well in sand, diam 8 in, depth 32 ft. MP, top of concrete block, 1.85 ft above lsd. Highest water level 14.30 below lsd, Apr. 11, 1950; lowest 23.30 below lsd, Oct. 3-7, 1954. Records available: 1948-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	22.15	21.50	20.55	19.55	19.75	20.40	20.90	21.90	20.80	21.20	21.90	21.65
10	22.10	21.30	20.25	19.65	20.20	20.50	20.90	21.05	20.30	21.00	22.15	22.00
15	22.05	21.40	20.00	19.40	20.25	20.90	21.25	21.35	20.75	21.70	21.75	22.15
20	21.80	20.90	19.40	19.35	20.15	20.55	21.70	20.90	20.90	21.80	21.90	22.20
25	21.60	20.70	19.40	19.50	20.35	20.75	21.75	20.85	21.20	21.80	21.85	21.35
Eom	21.65	20.70	19.50	19.70	19.65	21.20	21.70	20.60	21.00	21.40	22.05	22.00

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	21.65	21.15	20.75	21.50	21.00	20.90	20.45	21.45	21.05	21.10	21.75	21.50
10	20.85	21.10	19.65	21.00	20.40	21.00	21.10	21.05	21.15	21.15	22.00	21.30
15	21.80	20.45	20.80	21.65	21.00	21.20	21.05	21.35	21.15	21.25	21.90	21.35
20	e21.95	20.95	20.85	20.80	20.45	21.35	21.60	21.20	20.95	21.80	21.95	21.30
25	21.30	20.25	20.40	20.80	21.25	21.30	21.65	20.95	21.20	21.85	21.80	20.55
Eom	21.35	20.85	21.00	20.85	21.05	21.20	21.30	21.05	21.15	21.45	21.80	18.40

e Estimated.

Lawrence County

La-1. Crystal Ice Co. 9th and Railroad Sts., Ironton. Lat  $38^{\circ}32'$ , long  $83^{\circ}41'$ . Drilled unused artesian well in gravel, diam 16 in, depth 77 ft. MP, floor of instrument shelter, 4.65 ft above lsd. Highest water level 40.03 below lsd, Apr. 13, 1951; lowest 53.77 below lsd, Oct. 19, 1947. Records available: 1947-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	49.05	49.31	46.95	43.62	43.36	43.94	45.42	46.09	46.37	46.66	46.98	47.55
10	49.01	49.10	46.75	42.88	43.50	44.15	45.63	46.20	46.42	46.76	47.25	47.47
15	49.34	48.67	46.07	43.19	43.84	44.45	45.65	46.21	46.60	46.61	47.15	47.40
20	49.24	48.34	44.77	42.77	43.93	44.93	45.82	46.25	46.59	46.75	47.18	47.46
25	49.15	48.08	43.95	42.39	43.88	45.03	45.92	46.23	46.31	47.02	47.08	47.03
Eom	49.23	47.56	44.09	43.11	44.10	45.27	45.86	46.47	46.45	46.94	47.02	47.25

1957												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	46.80	46.00	44.20	44.34	43.20	44.42	45.60	46.57	47.18	47.60	47.87	48.18
10	47.15	45.60	43.85	44.20	43.50	44.95	45.72	46.60	47.27	47.56	47.86	48.08
15	47.10	44.90	44.05	43.58	43.65	44.80	45.90	46.86	47.29	47.75	48.10	47.90
20	46.62	44.10	44.35	43.22	43.72	45.08	46.00	46.85	47.30	47.65	48.04	47.85
25	46.51	44.00	44.20	43.30	44.00	45.28	46.29	46.90	47.46	47.72	48.05	47.88
Eom	46.75	43.85	44.35	43.35	44.25	45.45	46.44	47.05	47.44	47.92	47.95	47.70

Licking County

Li-2. Heath Refinery, Newark. Lat  $40^{\circ}02'$ , long  $82^{\circ}28'$ . Drilled observation artesian well in gravel, diam 6 in, depth 23 ft. MP, floor of instrument shelter, 3.80 ft above lsd. Highest water level 1.18 above lsd, June 22, 1956; lowest 18.55 below lsd, Dec. 17-18, 1953. Records available: 1953-57. Water levels affected by pumping.

Li-2--Continued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	12.47	12.01	....	1.02	1.81	1.40	2.46	5.20	2.90	3.80	4.63	5.30
10	12.55	11.10	....	1.60	2.38	2.34	3.34	5.64	3.14	4.00	4.72	4.44
15	12.62	10.39	....	2.16	2.15	3.54	3.84	5.03	3.23	4.07	4.84	4.54
20	12.68	9.47	....	2.44	2.87	3.94	4.40	4.41	3.34	4.17	4.98	4.68
25	12.76	8.58	....	2.95	3.41	.22	4.62	4.18	3.49	4.32	4.99	4.62
Eom	12.76	7.91	1.85	2.80	1.04	1.94	4.97	4.00	3.67	4.36	5.14	4.56
1957												
5	4.68	3.00	1.61	0.09	1.33	1.31	0.50	2.16	3.48	3.99	4.85	4.36
10	4.63	1.84	1.42	.18	1.52	.77	1.55	2.30	3.66	4.21	4.89	2.00
15	4.56	1.91	1.51	.61	1.27	1.02	1.93	2.47	3.33	4.36	4.04	2.47
20	4.75	1.87	1.56	.43	1.00	1.41	1.54	2.68	3.64	4.57	3.55	....
25	3.01	1.78	1.69	.87	.74	.03	1.79	2.95	3.36	4.43	3.96	1.07
Eom	3.07	1.63	1.57	1.01	1.11	+.01	1.91	3.26	3.71	4.67	4.12	.76

Lucas County

Lu-1. State of Ohio. Toledo State Hospital. Detroit Ave. and Arlington St., Toledo. Lat  $41^{\circ}40'32''$ , long  $83^{\circ}36'24''$ . Drilled unused artesian well in limestone, diam 12 in, depth 250 ft. MP, floor of instrument shelter 3.10 ft above lsd. Highest water level 84.10 below lsd, July 18, 1947; lowest 117.25 below lsd, Sept. 18, 1957. Records available: 1946-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	100.50	99.10	97.80	96.95	96.75	96.35	101.80	108.10	110.60	116.00	113.60	108.40
10	100.20	98.80	98.10	97.00	96.35	97.60	101.00	110.20	110.90	114.35	114.35	107.25
15	99.90	98.80	98.00	96.30	96.25	99.25	100.90	109.55	112.40	115.30	112.95	....
20	99.65	98.55	97.85	96.95	96.60	100.10	105.10	108.90	112.90	116.50	112.30	....
25	99.65	98.10	97.60	96.90	96.90	101.45	105.95	110.40	112.90	114.65	110.35	....
Eom	99.75	98.30	97.20	96.80	96.45	103.55	106.85	111.70	115.30	112.15	110.30	....
1957												
5	.....	101.75	100.05	98.50	98.35	99.55	107.15	113.75	116.00	116.00	117.80	113.15
10	103.60	101.05	99.80	98.75	98.40	101.70	.....	114.80	116.30	116.55	117.50	111.40
15	103.05	101.00	99.55	98.75	98.50	106.00	.....	115.15	116.75	116.80	117.20	110.60
20	102.75	100.85	99.35	98.20	97.85	108.10	111.05	115.25	116.05	117.20	117.00	109.15
25	102.35	100.20	99.30	98.50	98.15	108.75	112.70	115.90	114.25	117.30	116.40	109.10
Eom	101.75	100.30	99.30	98.70	98.45	109.35	113.50	116.70	113.00	117.60	114.90	107.90

Mahoning County

Ma-1. City of Canfield. Lat  $41^{\circ}00'46''$ , long  $80^{\circ}45'36''$ . Drilled unused artesian well in sandstone, diam 8 in, depth 205 ft (previously reported as 300 ft). MP, top of instrument platform, at lsd. Highest water level 27.15 below lsd, May 22, 1949; lowest 110.75 below lsd, Sept. 27, 1946. Records available: 1946-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	33.84	33.31	32.45	31.50	31.25	30.90	31.10	31.12	31.57	33.46	34.26	33.79
10	33.70	33.40	32.11	31.61	31.14	31.04	31.50	31.12	31.84	33.61	33.95	33.57
15	33.75	33.43	32.22	31.48	31.04	31.21	31.25	31.18	31.97	33.85	34.15	33.50
20	33.53	33.32	32.02	31.42	31.00	31.09	31.24	31.45	31.90	34.04	33.96	33.46
25	33.50	32.77	31.84	31.32	31.03	31.09	31.30	31.38	32.64	34.06	33.75	33.41
Eom	33.45	32.73	31.62	31.30	30.90	31.15	31.22	31.47	33.14	34.18	33.61	33.00
1957												
5	32.85	32.15	31.50	31.50	31.26	31.77	31.80	32.02	33.22	35.19	35.30	34.86
10	32.75	32.20	31.39	31.40	31.31	31.73	31.60	32.22	33.40	35.36	35.37	34.79
15	32.65	31.98	31.55	31.49	31.16	31.61	31.72	32.45	34.75	35.29	35.41	34.48
20	32.40	31.86	31.38	31.30	31.23	31.58	31.70	32.76	34.97	35.25	35.42	34.40
25	32.35	31.75	31.40	31.20	31.18	31.61	32.04	32.84	34.98	35.25	35.13	34.40
Eom	32.20	31.60	31.36	31.18	31.18	31.51	e31.90	33.02	35.00	35.48	35.05	34.08

e Estimated.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Marion County

Mn-2. City of Marion. Lat  $40^{\circ}35'46''$ , long  $83^{\circ}10'56''$  (previously reported as long  $80^{\circ}10'56''$ ). Drilled unused artesian well in limestone, diam 12 in, depth 67 ft. MP, floor of instrument shelter, 2.00 ft above lsd. Highest water level 31.14 below lsd, Apr. 16, 1951; lowest 49.50 below lsd, Feb. 11, 1956. Records available: 1950-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	48.46	49.40	48.17	46.66	46.65	46.30	46.75	47.00	46.85	47.50	47.35	47.85
10	48.53	49.48	47.85	46.41	46.62	46.46	46.90	47.05	46.87	47.43	47.73	47.75
15	48.72	49.25	47.33	46.78	46.72	46.93	47.09	46.94	47.20	47.45	47.79	48.00
20	48.86	49.06	46.83	46.97	46.75	46.82	47.09	46.85	47.18	47.66	47.59	48.07
25	49.02	49.03	46.68	46.91	47.27	46.76	47.00	47.10	47.13	47.51	47.48	47.76
Eom	49.25	48.71	46.64	46.42	46.98	46.93	46.85	47.15	47.25	47.46	47.81	47.95

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	48.13	48.02	47.50	47.80	43.60	44.30	44.68	46.43	47.21	47.35	47.16	47.14
10	48.25	47.96	47.47	47.07	43.86	44.14	44.70	46.72	47.24	47.28	47.23	47.09
15	48.23	47.87	47.70	44.75	43.99	44.62	44.88	46.80	47.28	47.25	47.33	46.94
20	48.37	47.78	47.43	43.40	43.66	45.07	45.40	47.01	47.42	47.27	47.37	47.08
25	48.45	47.65	47.56	43.25	44.27	44.85	45.78	47.10	47.36	47.30	47.28	46.62
Eom	48.33	47.70	47.70	43.14	44.35	44.76	46.22	47.20	47.25	47.18	47.10	46.25

Medina County

Md-1. City of Lodi. Lat  $41^{\circ}01'46''$ , long  $82^{\circ}01'06''$ . Drilled unused water-table well in gravel, diam 6 in, depth 65 ft. MP, floor of instrument platform, 1.90 ft above lsd. Highest water level 9.00 below lsd, Mar. 2, 1952; lowest 29.90 below lsd, June 18, 1955. Records available: 1946-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	22.00	21.80	21.50	.....	21.30	21.30	21.90	21.70	21.50
10	.....	.....	21.60	22.10	21.80	21.50	20.60	21.00	21.40	21.70	22.00	21.00
15	.....	.....	21.50	22.50	21.30	22.10	20.50	20.60	21.30	21.60	21.40	21.00
20	.....	.....	22.20	22.70	20.80	22.30	20.50	20.80	20.90	22.20	21.60	21.30
25	.....	.....	21.70	22.60	21.10	21.40	20.70	21.90	21.70	21.90	21.00	20.60
Eom	.....	.....	22.00	22.00	.....	.....	21.50	21.20	21.40	21.40	22.20	19.70

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	20.80	19.90	.....	18.80	18.90	.....	22.80	23.40	22.90	.....	.....
10	.....	20.40	20.20	18.60	19.10	19.60	.....	23.10	23.40	22.60	.....	.....
15	.....	20.40	19.90	18.80	.....	20.00	.....	23.60	22.90	22.60	.....	.....
20	.....	20.70	19.30	18.80	.....	19.90	.....	23.00	22.90	22.60	.....	.....
25	21.50	20.00	19.70	18.70	.....	19.60	.....	22.60	22.70	22.50	22.80	.....
Eom	20.70	20.20	.....	18.60	.....	19.20	.....	23.10	22.40	.....	22.20	.....

Montgomery County

Mt-2. Dayton Power & Light Co. 118 East 4th St. Lat  $39^{\circ}45'$ , long  $84^{\circ}11'$ . Drilled unused water-table well in gravel, diam 8 in, depth 57 ft. MP, floor of instrument shelter, 5.68 ft above lsd. Highest water level 20.97 below lsd, Mar. 25, 1943; lowest 43.30 below lsd, Aug. 27, 1955. Records available: 1942-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	34.40	35.25	32.45	32.15	32.65	33.80	36.15	39.35	41.05	41.55	41.65	41.30
10	34.45	35.25	32.75	31.60	32.80	34.35	36.45	40.25	40.75	41.25	41.65	41.15
15	34.65	34.50	32.45	31.60	33.35	35.55	37.10	40.70	41.60	41.25	41.65	41.30
20	34.95	33.90	32.20	31.90	33.60	36.30	37.90	40.90	41.50	41.90	41.45	41.20
25	35.10	33.60	32.25	32.00	34.25	36.35	38.25	41.35	41.10	42.00	.....	40.75
Eom	35.35	33.05	32.20	32.25	34.20	36.30	38.75	41.80	41.25	42.00	41.15	40.15

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	39.95	38.45	37.55	37.55	33.80	34.25	33.95	36.00	37.90	39.10	39.00	38.05
10	39.90	38.55	37.30	35.65	34.40	34.55	33.35	36.65	38.00	39.10	38.95	37.80
15	39.60	38.30	37.65	34.05	34.95	35.40	33.45	37.15	38.65	38.95	39.10	37.40
20	e39.75	38.10	37.50	33.80	35.20	35.75	34.25	37.35	39.25	39.15	38.85	37.25
25	39.45	38.10	37.25	33.65	35.15	35.65	34.90	37.80	39.15	39.20	38.40	35.90
Eom	38.70	38.30	37.55	33.80	34.05	35.55	35.60	38.15	38.80	39.00	38.25	34.55

e Estimated.

Mt-3. State Highway Dept. Stewart St., Patterson Blvd., and Miami River. Lat  $39^{\circ}44'$ , long  $84^{\circ}12'$ . Drilled unused water-table well in gravel, diam 6 in, depth 80 ft. MP, floor of instrument shelter, 1.20 ft above lsd. Highest water level 34.53 below lsd, Aug. 17, 1947; lowest 68.76 below lsd, Oct. 20, 1956. Records available: 1945-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	54.40	57.84	53.85	54.15	56.25	57.24	60.83	.....	64.40	68.10	68.53	66.80
10	54.85	57.60	55.05	53.35	56.69	58.20	60.94	.....	64.92	68.03	68.53	67.25
15	55.40	56.60	54.50	53.65	56.57	60.07	61.50	.....	65.85	68.07	.....	67.64
20	56.60	55.53	53.94	54.08	57.05	60.37	62.35	.....	66.23	68.76	67.90	67.33
25	56.80	55.77	53.88	53.80	58.30	60.48	62.20	.....	66.68	68.40	67.44	66.48
Eom	57.62	54.22	54.42	54.80	57.52	61.56	62.98	64.75	67.36	68.25	66.78	65.17
						1957						
5	64.53	.....	63.97	64.70	59.42	57.62	54.42	56.47	57.30	59.38	59.64	57.98
10	64.77	.....	64.20	60.32	59.92	57.57	53.47	55.90	57.56	59.43	59.71	57.55
15	64.74	65.02	64.87	58.82	60.02	58.42	53.61	55.45	58.25	59.01	59.40	57.56
20	.....	64.43	64.80	59.29	59.74	58.28	54.95	55.90	58.85	59.60	58.99	57.09
25	.....	64.50	64.94	.....	58.74	58.30	55.77	56.57	58.82	59.91	58.84	55.09
Eom	.....	64.90	65.26	58.90	58.10	56.95	56.47	57.48	58.54	59.66	58.20	54.38

Mt-49. E. F. Stenger. Lat  $39^{\circ}40'20''$ , long  $84^{\circ}16'30''$ . Drilled unused water-table well in gravel, diam 6 in, depth 220 ft (previously reported as 212 ft). MP, floor of instrument shelter, 2.50 ft above lsd. Highest water level 10.82 below lsd, Feb. 18, 1950; lowest 21.82 below lsd, Dec. 24, 1954. Records available: 1947-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	19.10	19.04	16.87	15.73	15.98	16.54	17.21	18.18	19.28	20.16	20.72	21.27
10	19.20	18.61	16.53	15.43	16.15	16.72	17.36	18.40	19.44	20.25	20.81	21.15
15	19.29	18.26	16.54	15.42	16.27	16.86	17.51	18.56	19.59	20.33	20.93	21.12
20	19.39	17.77	16.52	15.65	16.44	16.75	17.65	18.70	19.75	20.43	21.01	21.14
25	19.53	17.69	16.47	15.79	16.63	16.94	17.85	18.91	19.91	20.52	21.04	21.15
Eom	19.52	16.71	16.35	15.85	16.42	17.15	18.02	19.14	20.05	20.67	21.14	21.19
						1957						
5	21.26	20.88	20.04	18.67	.....	15.21	14.76	16.18	17.70	18.55	.....	19.02
10	21.32	20.79	20.04	15.93	.....	15.37	e14.75	16.48	17.85	18.67	.....	18.75
15	21.35	20.60	20.05	15.49	16.32	15.49	14.88	16.77	17.93	18.78	.....	18.74
20	21.40	20.56	20.11	15.35	16.16	15.46	15.28	16.98	18.14	18.82	.....	18.03
25	20.91	20.54	20.13	15.41	.....	15.61	15.53	17.19	18.21	18.85	.....	17.29
Eom	20.85	20.24	20.23	15.59	15.31	15.02	e15.90	17.53	18.38	18.97	19.00	16.80

e Estimated.

Muskingum County

Mu-1a. City of Zanesville. Lat  $39^{\circ}57'15''$ , long  $81^{\circ}59'30''$ . Drilled unused water-table well in gravel, diam 6 in, depth 135 ft. MP, floor of instrument shelter, 2.50 ft above lsd. Highest water level 11.40 below lsd, Mar. 29, 1945; lowest 37.25 below lsd, Aug. 1-2, 1954. Records available: 1942-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	32.75	33.80	29.25	26.50	27.00	23.90	25.95	28.00	23.95	29.20	29.85	31.20
10	33.45	33.65	28.85	25.95	26.45	23.60	26.05	28.05	23.90	29.10	30.20	31.50
15	33.80	32.20	.....	26.40	26.25	25.80	26.50	27.70	24.50	29.05	29.90	30.60
20	34.15	31.70	.....	27.45	25.90	25.15	27.40	27.40	24.70	29.50	30.10	30.65
25	34.50	31.15	.....	27.60	26.60	26.25	27.60	24.90	24.90	29.65	30.15	30.25
Eom	35.00	30.60	27.20	26.80	25.50	25.55	27.70	24.55	24.90	29.90	30.70	30.20
						1957						
5	30.50	31.25	32.10	31.35	26.00	27.70	24.55	31.60	34.65	32.75	33.30	32.40
10	31.10	31.50	31.25	29.05	27.80	28.25	26.85	32.70	34.85	32.90	32.90	31.85
15	31.20	32.05	32.00	27.10	27.10	29.00	27.10	33.65	35.10	33.00	32.95	32.00
20	32.10	31.60	31.35	26.10	e24.55	29.65	29.65	34.05	34.50	33.05	33.00	31.80
25	32.00	31.80	30.40	26.05	27.30	28.60	29.90	34.65	33.90	33.40	32.75	31.35
Eom	31.25	32.35	31.40	26.45	27.35	28.55	30.25	34.40	33.40	33.40	30.60	30.40

e Estimated.

Mu-2. State of Ohio. Zanesville. Lat  $39^{\circ}57'00''$ , long  $82^{\circ}01'30''$ . Drilled test water-table well in gravel, diam 6 in, depth 53 ft (previously reported as 54 ft). MP, floor of instrument shelter, 4.10 ft above lsd. Highest water level 0.00, Jan. 27, 1952; lowest 9.03 below lsd, Sept. 28-Oct. 3, 1954. Records available: 1947-57.

Mu-2--Continued.

## Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	8.76	7.64	6.74	5.88	6.32	5.84	6.47	7.18	7.77	8.21	8.42	8.50
10	8.77	7.14	6.30	6.55	6.58	6.44	5.82	7.28	7.92	8.30	8.42	7.94
15	8.81	7.15	6.18	6.93	6.48	7.00	....	7.54	8.00	8.30	8.43	7.85
20	8.80	6.69	6.28	7.05	6.86	6.63	7.21	7.67	8.08	8.34	8.46	7.83
25	8.83	7.16	6.10	7.06	7.22	5.98	7.26	7.82	8.14	8.34	8.41	7.70
Eom	8.02	6.55	6.34	6.77	5.81	6.30	7.12	7.84	8.21	8.37	8.44	7.84
1957												
5	7.99	7.60	7.63	5.20	7.12	7.39	6.90	8.15	8.46	8.57	8.60	8.36
10	8.03	7.06	7.59	5.36	7.34	7.50	7.32	8.19	8.51	8.59	8.58	7.42
15	7.99	7.29	7.54	5.92	7.19	7.56	7.61	8.26	8.43	8.60	8.44	7.96
20	8.12	7.62	7.64	5.90	6.92	7.74	7.81	8.31	8.49	8.62	8.06	7.26
25	7.12	7.72	7.75	6.32	6.76	7.05	7.89	8.26	8.47	8.51	8.33	7.14
Eom	7.62	7.53	7.62	6.78	7.26	5.96	8.02	8.41	8.53	8.57	8.32	7.10

Portage County

Po-1. Edward Tiddle. Lat 41°14'06", long 81°02'48". Drilled unused artesian well in sandstone, diam 6 in, depth 55 ft. MP, floor of instrument shelter, 0.60 ft above lsd. Highest water level 14.49 below lsd, June 13, 1947; lowest 23.08 below lsd, Feb. 22, 1954. Records available: 1946-57.

## Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	21.54	21.78	21.04	20.34	19.68	18.17	18.33	18.57	18.69	19.14	19.50	19.89
10	21.60	21.70	20.95	20.18	19.50	18.13	18.43	18.54	18.73	19.24	19.57	19.87
15	21.54	21.62	20.88	20.00	19.19	18.36	18.51	18.50	18.77	19.27	19.61	19.89
20	21.69	21.51	20.75	19.98	18.85	18.35	18.40	18.51	18.86	19.32	19.67	19.89
25	21.70	21.34	20.65	19.97	18.60	18.17	18.61	18.52	18.92	19.42	19.68	19.95
Eom	21.88	21.24	20.52	19.79	18.24	17.19	18.61	18.61	19.05	19.42	19.78	19.93
1957												
5	19.95	19.84	19.53	18.83	17.77	17.81	18.28	18.74	19.50	19.92	20.45	20.70
10	20.05	19.70	19.49	18.59	17.75	17.93	18.35	18.80	19.58	19.99	20.57	20.55
15	19.98	19.71	19.38	18.31	17.80	18.08	18.38	18.88	19.59	20.13	20.51	20.70
20	20.05	19.66	19.34	18.12	17.78	18.21	18.41	19.38	19.67	20.61	20.57	20.46
25	19.87	19.55	19.29	17.95	17.81	18.30	18.55	19.33	19.76	20.35	20.61	20.52
Eom	19.80	19.58	19.26	17.83	17.83	18.24	e18.60	19.44	19.80	20.41	20.65	20.34

e Estimated.

Po-3. U. S. Army Engineer Corps. Ravenna Ordnance Plant. Lat 41°11', long 81°02'. Drilled unused artesian well in sandstone, diam 12 in, depth 172 ft. MP, floor of instrument shelter, 2.80 ft above lsd. Highest water level 26.40 below lsd, May 1, 1957; lowest 41.35 below lsd, Jan. 28, Feb. 6, 1954. Records available: 1950-57. Water levels affected by pumping.

## Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1950

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	....	....	....	....	33.44	33.32	33.32	33.12	33.42	32.87	33.67
10	....	....	....	....	....	33.71	33.40	33.23	32.98	32.98	33.90	33.60
15	....	....	....	....	....	....	33.53	33.13	33.22	33.42	33.47	33.81
20	....	....	....	....	33.46	33.46	32.87	33.20	32.90	33.12	33.60	33.87
25	....	....	....	....	33.23	....	33.16	32.96	33.25	33.29	33.07	33.32
Eom	....	....	....	....	33.67	33.58	33.00	33.01	33.07	33.05	32.93	33.15
1951												

5	33.18	33.36	32.30	31.76	30.40	31.10	31.45	....	32.85	32.90	33.85	33.80
10	32.95	33.87	32.86	30.90	30.85	....	31.85	32.05	31.85	32.70	33.85	32.35
15	32.37	33.38	31.51	30.45	30.90	31.40	32.20	32.50	32.10	32.55	33.70	....
20	32.78	33.28	31.74	31.43	30.70	31.75	32.25	....	32.20	33.15	33.80	....
25	31.79	32.69	31.64	31.05	30.90	31.55	32.95	33.20	32.60	33.30	32.95	33.00
Eom	33.23	33.26	31.23	30.95	30.85	31.65	32.90	32.85	32.55	33.35	33.30	32.60
1952												

5	32.50	32.30	31.70	33.40	34.20	34.90	35.80	36.20	37.00	37.40	37.20	37.20
10	32.90	32.25	31.45	34.05	34.25	34.70	35.70	35.95	36.75	37.50	37.60	37.70
15	32.60	32.20	31.20	33.80	34.85	35.30	35.45	36.30	36.35	36.95	36.85	38.35
20	32.80	31.85	32.50	34.10	....	35.25	35.45	36.60	37.15	37.40	37.75	38.40
25	32.95	31.70	32.85	34.35	34.70	35.10	35.30	....	37.40	37.55	38.30	38.20
Eom	32.80	31.25	32.95	34.30	34.85	35.45	35.95	36.55	37.30	37.55	38.35	38.65

Po-3--Continued.

1953												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	38.70	39.15	39.15	38.65	37.50	38.00	38.25	39.35	39.75	39.55	40.70	40.40
10	38.75	.....	39.50	38.55	37.10	38.35	38.90	39.30	39.95	38.45	40.70	.....
15	39.25	38.85	37.95	38.95	36.85	38.35	38.85	39.30	39.85	40.15	40.40	40.20
20	38.65	39.30	39.10	38.70	37.05	38.45	38.50	39.35	39.85	40.05	40.55	40.15
25	39.05	39.15	38.85	37.70	.....	38.45	39.20	39.50	40.05	40.15	40.05	40.50
Eom	39.00	39.20	38.60	37.50	.....	38.50	39.35	39.50	40.35	40.50	39.90	40.75
1954												
5	40.65	40.90	41.15	39.70	38.00	37.80	37.85	37.55	37.40	37.50	36.95	36.90
10	41.00	40.70	40.35	39.55	37.40	37.65	38.05	36.40	36.85	.....	37.40	35.50
15	40.85	39.75	40.30	39.00	.....	37.95	37.90	36.25	37.10	35.75	37.10	36.15
20	40.85	40.30	39.55	39.25	37.30	37.75	37.50	37.40	36.95	36.00	36.25	36.45
25	41.05	40.60	40.20	37.85	37.25	38.00	37.75	36.95	37.25	36.80	36.80	36.85
Eom	41.10	40.75	39.90	38.70	37.45	38.05	36.30	37.25	37.25	37.05	37.40	36.45
1955												
5	35.80	36.30	35.45	33.65	33.75	33.20	33.40	34.10	33.70	33.85	34.15	34.10
10	35.90	35.55	35.05	33.65	33.75	33.75	33.75	.....	33.75	33.90	33.70	33.35
15	35.40	35.70	35.20	34.40	33.00	.....	33.85	34.05	34.00	33.50	34.10	33.75
20	35.00	34.95	35.20	34.05	33.70	33.65	34.10	34.05	33.95	34.30	33.85	34.25
25	35.90	35.90	34.70	33.65	33.70	33.60	33.70	34.05	34.20	33.85	34.05	33.80
Eom	35.55	35.00	34.80	34.20	32.85	33.60	33.80	33.75	33.95	34.00	34.15	33.65
1956												
5	32.70	32.85	32.25	31.25	31.30	30.95	31.75	31.85	32.10	32.25	31.20	31.85
10	33.30	33.25	32.85	31.45	31.35	30.95	31.50	32.00	31.45	32.05	31.40	31.05
15	32.70	33.50	32.70	31.10	31.30	30.65	31.95	32.00	31.65	31.05	31.25	31.40
20	33.45	33.20	32.30	31.80	31.35	31.00	32.25	32.05	32.10	31.75	31.40	31.25
25	.....	32.05	31.15	32.05	31.40	31.40	32.00	32.35	32.15	.....	31.20	30.30
Eom	34.55	33.00	31.65	31.45	30.70	31.60	32.05	32.10	32.10	31.20	31.70	30.55
1957												
5	30.20	29.70	28.95	27.90	26.75	27.20	27.25	29.10	29.75	29.60	29.60	31.40
10	30.55	29.25	28.90	28.15	27.10	27.50	27.35	29.30	30.05	28.90	30.30	30.90
15	30.25	29.50	28.80	27.60	27.20	27.65	28.15	28.95	29.50	29.00	30.00	31.30
20	30.55	29.50	28.50	27.30	27.05	27.75	27.85	29.65	30.30	29.75	30.65	30.55
25	30.05	28.80	28.10	27.35	27.30	27.75	28.40	29.40	30.20	28.35	30.90	31.40
Eom	29.70	28.95	28.70	26.75	27.00	27.60	28.20	29.80	29.50	28.40	31.00	31.15

Po-4. U. S. Army Engineer Corps. Ravenna Ordnance Plant. Lat 41°11', long 81°06'. Drilled unused artesian well in sandstone, diam 12 in, depth 225 ft. MP, floor of instrument platform, 2.50 ft above lsd. Highest water level 24.15 below lsd, May 4, 1951; lowest 35.35 below lsd, Feb. 17, 1954. Records available: 1950-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	32.05	32.30	30.80	28.95	28.00	26.35	28.10	27.80	.....	28.05	29.45	.....
10	31.95	32.05	30.80	28.85	27.70	26.60	28.50	27.70	27.90	28.50	29.70	30.85
15	31.90	32.00	30.55	28.10	27.00	26.85	28.60	.....	27.90	28.55	29.80	30.90
20	32.20	31.45	30.25	28.70	26.85	26.80	28.45	27.55	28.00	28.70	29.90	30.70
25	32.25	31.15	29.75	28.65	26.95	26.85	28.15	27.75	.....	29.15	.....	30.75
Eom	32.65	31.35	29.35	28.25	26.55	27.50	28.05	27.60	27.75	29.05	.....	30.60
1957												
5	30.45	30.00	28.75	27.10	26.45	27.05	27.55	28.60	29.45	30.10	30.60	30.80
10	30.85	29.20	28.70	26.90	26.60	27.35	27.85	28.55	e29.55	30.20	30.85	30.35
15	30.40	29.30	28.35	26.65	26.70	27.55	28.00	28.70	29.50	30.25	30.60	30.70
20	30.55	29.20	28.20	26.25	26.60	27.50	28.05	28.95	29.65	30.45	30.60	29.95
25	30.05	28.80	28.10	26.05	26.85	27.60	28.30	29.00	29.85	30.45	30.60	30.25
Eom	29.90	28.90	28.10	26.15	26.95	27.75	28.30	29.20	29.85	30.55	30.70	29.80

e Estimated.

Richland County

R-2. City of Lexington. Lat 40°40'42", long 82°34'40". Drilled unused artesian well in sandstone, diam 6 in, depth 129 ft. MP, top of instrument platform, 4.00 ft below lsd. Highest water level 22.12 below lsd, June 8, 1947; lowest 28.24 below lsd, Dec. 3, 1952. Records available: 1946-57.

R-2--Continued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	27.13	27.18	25.26	25.41	26.28	25.01	25.66	26.22	26.62	27.20	27.45	27.54
10	27.19	26.71	....	25.62	26.01	25.38	25.91	25.71	26.74	27.24	27.47	27.40
15	27.24	26.27	....	25.84	....	25.74	26.16	25.95	26.86	27.30	27.50	27.32
20	27.32	....	....	26.00	....	25.89	26.35	26.15	26.96	27.34	27.52	27.31
25	27.37	25.93	....	26.18	....	25.46	26.47	26.34	27.03	27.38	27.50	27.29
Eom	27.24	25.15	25.24	26.25	25.19	25.37	26.12	26.50	27.11	27.40	27.53	27.29

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	27.29	26.64	26.18	25.40	25.49	25.48	24.84	26.51	27.28	26.47	26.93	26.60
10	27.32	26.51	26.27	23.93	25.79	25.66	....	26.71	27.37	26.60	26.90	25.72
15	27.34	26.31	26.15	24.22	25.58	25.88	....	26.87	27.36	26.71	26.85	25.78
20	27.38	26.38	26.18	24.48	25.58	25.97	....	27.00	27.36	26.78	26.70	25.45
25	26.88	26.45	26.29	24.77	25.04	25.97	....	27.10	26.20	26.81	26.64	24.98
Eom	e26.70	26.21	26.32	25.11	25.42	24.78	26.44	27.20	26.31	26.88	26.60	24.75

e Estimated.

R-4. City of Mansfield. Lat  $40^{\circ}45'30''$ , long  $82^{\circ}31'00''$ . Drilled unused artesian well in gravel, diam 14 in, depth 127 ft. MP, floor of instrument shelter, 4.70 ft above lsd. Highest water level 28.70 below lsd, May 31, 1949; lowest 56.45 below lsd, Feb. 15-16, 1957. Records available: 1942-47, 1949-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	46.70	47.30	48.00	48.30	49.30	49.20	43.65	50.40	49.95	52.50	52.50	52.90
10	46.30	50.60	50.00	47.70	48.45	49.60	46.70	51.45	49.45	51.75	53.90	51.00
15	43.30	50.00	49.65	47.80	48.10	51.35	48.90	51.05	52.35	51.15	53.95	54.30
20	48.80	47.85	47.40	48.80	50.00	51.20	50.10	49.55	52.10	52.05	52.10	53.45
25	48.65	50.20	47.40	48.10	50.55	51.15	49.80	50.35	50.80	52.85	46.20	45.60
Eom	49.45	49.90	49.35	47.00	49.20	51.90	50.35	50.35	49.10	53.00	52.90	45.60

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	52.95	55.15	55.00	54.90	52.70	50.50	42.95	46.90	50.95	52.30	51.10	51.90
10	54.85	54.50	53.75	54.45	53.60	....	49.20	....	50.55	52.40	50.80	51.00
15	54.05	56.45	56.15	52.55	52.20	....	47.40	....	49.25	50.90	53.05	48.70
20	53.10	55.55	53.60	54.95	49.00	....	50.70	....	52.50	49.35	53.60	52.40
25	55.60	53.35	52.00	54.65	....	....	50.35	....	51.80	54.40	50.05	51.10
Eom	55.75	55.90	53.55	53.70	....	48.00	49.50	52.10	48.60	52.70	47.45	44.20

**Ross County**

Ro-3. Mead Paper Corp. Hickory St. and Baltimore & Ohio RR. tracks. Chillicothe. Lat  $39^{\circ}20'$ , long  $82^{\circ}58'$ . Drilled unused water-table well in gravel, diam 30 in, depth 91 ft. MP, top of casing, 1.50 ft above lsd. Highest water level 17.20 below lsd, Mar. 21, 1943; lowest 42.92 below lsd, Dec. 24, 1949. Records available: 1941-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	37.45	40.16	37.33	33.40	31.24	31.95	32.17	34.03	35.96	37.27	38.94	40.05
10	38.10	39.80	36.83	32.55	31.38	32.10	31.38	34.35	36.10	37.60	39.20	40.25
15	38.75	39.55	35.92	31.93	31.50	32.15	31.88	34.65	36.43	37.82	39.41	40.40
20	39.30	39.29	35.13	31.41	31.64	32.30	32.63	34.92	36.52	38.02	39.62	40.53
25	39.63	38.34	34.56	31.17	31.73	32.41	33.12	35.30	36.72	38.28	39.77	40.57
Eom	40.12	37.88	34.06	31.14	31.80	32.53	33.65	35.83	37.04	38.63	39.93	40.21

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	40.45	41.43	40.58	39.93	32.80	32.25	30.68	32.21	33.85	36.33	38.40	38.00
10	40.77	41.55	40.37	36.70	32.65	32.16	29.28	32.31	34.22	36.57	38.69	38.11
15	41.00	....	40.25	34.46	32.57	31.97	29.39	32.67	34.76	36.96	38.70	37.72
20	41.14	....	40.15	33.98	32.58	31.49	30.37	33.08	35.20	37.40	38.69	37.66
25	41.26	....	40.15	33.40	32.48	31.68	31.25	33.50	35.58	37.68	38.60	37.18
Eom	41.33	40.76	40.07	33.03	32.32	31.83	32.06	33.88	35.96	38.12	38.50	35.62

**Scioto County**

Sc-1. Detroit Steel Corp. New Boston. Lat  $38^{\circ}45'$ , long  $82^{\circ}56'$ . Drilled unused water-table well in coarse sand, diam 26 in, depth 81 ft. MP, floor of instrument shelter, 1.80 ft above lsd. Highest water level 31.05 below lsd, Mar. 19, 1956; lowest 58.81 below lsd, Nov. 19, 1957. Records available: 1955-57. Water levels affected by pumping.

Sc-1--Continued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1955												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	.....	.....	53.15	55.55	57.05	57.60	57.60	57.90	56.70
10	.....	.....	.....	.....	48.55	53.80	55.80	57.25	57.65	57.55	57.75	56.45
15	.....	.....	.....	.....	49.65	54.30	55.95	57.35	57.70	57.70	57.75	56.55
20	.....	.....	.....	.....	50.25	54.65	56.10	57.45	57.80	57.85	57.85	56.70
25	.....	.....	.....	.....	51.20	54.95	56.40	57.50	57.70	57.90	56.75	56.95
Eom	.....	.....	.....	.....	52.35	55.30	56.75	57.60	57.60	57.85	56.55	56.95
1956												
5	57.05	55.55	40.10	.....	.....	44.25	49.90	52.25	.....	55.70	57.05	57.70
10	57.15	.....	40.90	.....	.....	43.35	50.60	52.20	.....	55.95	57.25	57.90
15	57.10	.....	35.00	.....	.....	46.20	51.40	51.00	53.90	56.25	57.40	57.30
20	57.25	46.85	.....	.....	.....	47.80	52.10	51.40	54.30	56.45	57.55	55.40
25	57.40	41.65	.....	.....	44.40	48.80	52.55	.....	54.80	56.75	57.60	53.60
Eom	57.30	41.30	.....	.....	45.40	49.00	52.30	.....	55.30	57.00	57.60	52.25
1957												
5	52.30	47.15	45.80	49.65	45.10	51.45	.....	55.60	57.75	58.25	58.40	58.40
10	52.95	44.40	46.05	47.25	.....	52.10	.....	55.85	57.95	58.30	58.60	58.00
15	.....	40.25	46.55	40.85	.....	52.80	e54.60	56.05	58.10	58.40	58.70	56.00
20	.....	42.10	47.25	e41.25	e49.25	.....	54.80	56.45	58.20	58.50	58.70	55.60
25	.....	44.50	48.30	42.60	49.90	.....	55.05	56.95	58.05	58.55	58.25	54.80
Eom	50.60	45.70	49.30	43.70	50.65	.....	55.35	57.40	58.20	58.55	58.45	52.85

e Estimated.

Stark County

St-1. Republic Steel Corp., Oberlin Ave., Massillon. Lat  $40^{\circ}47'$ , long  $81^{\circ}31'$ . Drilled unused water-table well in gravel, diam 6 in, depth 161 ft (previously reported as 48 ft). MP, top of concrete base, 6.00 ft below lsd. Highest water level 41.70 below lsd, June 16, 1947; lowest 56.02 below lsd, Feb. 5-6, 1956. Records available: 1942-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	55.16	56.02	54.02	52.52	53.00	50.18	49.21	.....	47.45	49.05	50.35	51.62
10	55.30	55.86	53.49	52.53	52.62	50.18	48.48	.....	47.70	49.25	.....	51.71
15	55.45	55.56	52.82	52.70	51.74	50.34	47.85	.....	47.90	49.55	.....	51.96
20	55.66	55.41	52.63	52.93	51.25	50.14	47.40	.....	48.15	49.85	.....	52.06
25	55.79	55.47	52.61	52.97	51.12	50.00	46.93	.....	48.40	50.10	51.30	52.01
Eom	55.91	54.45	52.57	52.88	50.69	50.02	.....	.....	48.65	50.30	51.49	52.10
1957												
5	52.31	52.87	53.13	53.05	49.68	49.52	.....	48.57	49.80	50.34	50.80	51.28
10	52.45	52.99	53.20	51.50	49.81	49.52	.....	48.75	49.91	50.36	51.00	51.01
15	52.58	53.02	53.14	50.50	49.60	49.78	47.92	48.96	50.07	50.32	51.08	51.18
20	52.76	53.08	53.11	50.22	49.39	49.84	48.13	49.13	50.22	50.53	51.06	51.26
25	52.72	53.07	53.02	50.03	49.50	49.78	48.28	49.27	50.10	50.74	51.11	50.81
Eom	52.78	53.17	53.14	49.65	49.58	49.47	48.44	49.60	50.09	50.84	51.28	50.46

St-4. Adessi Bros. Near Canton. Lat  $40^{\circ}51'00''$ , long  $81^{\circ}20'00''$ . Drilled unused water-table well in gravel, diam 4 in, depth 190 ft. MP, top of casing, 4.00 ft above lsd. Highest water level 6.92 below lsd, Feb. 6, 1952; lowest 22.42 below lsd, Feb. 2, 1942. Records available: 1941-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	21.19	.....	13.86	14.23	.....	10.17	11.28	12.19	13.40	14.73	15.90	.....
10	21.37	22.02	.....	13.83	13.61	.....	11.29	12.40	13.63	14.94	15.99	.....
15	21.48	.....	13.87	.....	9.83	10.42	11.45	12.59	13.82	15.13	16.04	.....
20	21.65	.....	14.02	.....	10.12	10.68	11.66	12.85	14.01	15.33	16.13	.....
25	21.84	.....	13.81	14.17	.....	10.29	10.83	11.85	12.99	14.23	15.52	16.23
Eom	.....	13.81	14.27	.....	10.14	11.07	12.05	13.19	14.48	15.72	16.35	.....
1957												
5	16.49	15.25	.....	.....	.....	.....	.....	.....	.....	17.65	18.55	.....
10	16.60	15.27	.....	.....	.....	.....	12.75	.....	.....	17.83	18.13	.....
15	.....	15.26	.....	.....	.....	13.19	.....	.....	.....	17.95	18.11	.....
20	.....	15.36	.....	.....	.....	13.62	.....	.....	17.20	18.09	18.22	.....
25	16.95	15.40	.....	.....	.....	e13.90	.....	.....	17.33	18.22	17.77	.....
Eom	15.05	15.45	.....	.....	.....	.....	.....	.....	17.53	18.40	17.29	.....

e Estimated.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

St-5a. City of Canton. Canton Waterworks. Northeast well field. 30th St. and Harrisburg Rd. Lat 40°50', long 81°21'. Drilled unused water-table well in gravel, diam 12 in, depth 132 ft. MP, top of instrument platform, 1.00 ft above lsd. Highest water level 26.45 below lsd, Mar. 11, 1950; lowest 54.00 below lsd, Feb. 10, 1956. Records available: 1949-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	52.15	53.85	51.05	47.95	47.20	39.60	36.65	35.30	36.10	37.75	39.45	37.65
10	52.40	54.00	50.75	46.40	46.60	39.45	36.15	35.40	36.45	38.30	40.00	38.50
15	52.60	53.50	49.10	.....	46.35	39.60	35.20	35.60	36.80	38.75	40.85	38.25
20	53.10	52.75	49.15	46.25	45.40	38.75	34.90	35.55	38.15	39.40	38.55	39.55
25	53.35	53.00	49.00	45.70	43.95	39.25	34.60	35.35	38.00	39.40	37.85	39.75
Eom	53.60	52.50	48.40	47.00	41.60	36.55	34.85	36.25	36.90	39.35	37.65	40.25

1957

5	e41.95	41.85	43.05	.....	41.05	43.85	43.05	41.90	42.50	43.50	44.30	45.50
10	.....	41.10	42.15	.....	41.95	43.25	41.65	42.15	42.70	43.70	44.75	45.60
15	.....	41.25	42.45	.....	41.35	44.40	40.95	42.15	42.80	43.60	45.10	45.95
20	.....	41.20	42.40	41.90	41.50	43.70	42.05	42.15	43.25	44.00	45.60	46.55
25	41.55	41.15	42.50	42.60	41.60	43.50	41.35	42.50	43.15	44.05	45.00	45.40
Eom	41.25	41.55	43.05	41.00	42.00	43.60	41.75	42.65	43.15	44.30	45.20	45.25

e Estimated.

St-6. City of Canton. Ninth Street pumping station. Lat 40°47', long 81°23'. Drilled unused water-table well in gravel, diam 12 in, depth 80 ft. MP, floor of instrument shelter, 3.60 ft above lsd. Highest water level 1.29 above lsd, May 22, 1953; lowest 33.11 below lsd, Feb. 21, 1945. Records available: 1944-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	8.71	8.87	7.09	7.47	7.22	5.14	5.70	5.83	5.70	5.77	4.98	5.54
10	8.75	8.61	5.05	7.45	5.31	5.58	5.45	4.87	5.74	5.78	.....	5.61
15	8.77	8.55	6.61	7.42	6.12	5.81	5.47	4.19	5.72	5.81	4.71	5.67
20	8.81	8.54	7.14	7.36	6.44	5.88	5.53	5.25	5.71	5.82	5.00	5.17
25	8.89	8.45	7.36	7.37	6.42	5.82	5.60	5.55	5.75	5.73	5.23	4.84
Eom	8.88	5.72	7.45	7.22	3.87	5.77	5.72	5.66	5.77	5.16	5.41	4.59

1957

5	4.57	4.20	4.03	3.58	3.29	3.23	3.41	4.79	5.58	6.00	6.44	6.77
10	4.47	4.13	4.01	3.37	3.32	3.26	3.78	4.96	5.67	6.07	6.50	6.78
15	4.45	4.11	3.97	3.34	3.23	.....	3.98	5.10	5.70	6.17	6.55	6.81
20	4.42	4.13	3.92	3.32	3.21	.....	4.20	5.23	5.77	6.24	6.58	6.62
25	4.24	4.14	3.89	3.25	3.22	.....	4.40	5.35	5.82	6.36	6.65	6.63
Eom	4.24	4.06	3.89	3.26	3.24	2.30	4.60	5.50	5.91	6.38	6.71	6.55

St-11. City of Canton. Lat 40°51'02", long 81°24'03". Drilled unused artesian well in gravel, diam 6 in, depth 87 ft. MP, floor of instrument shelter, 3.50 ft above lsd. Highest water level 0.29 below lsd, June 7, 1947; lowest 53.35 below lsd, Mar. 29-30, 1957. Records available: 1946-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	48.15	40.75	37.10	.....	24.15	16.80	.....	22.00	25.60	28.10	35.80	39.80
10	48.25	.....	28.85	22.08	14.35	.....	22.40	25.60	28.35	37.40	39.55	.....
15	.....	31.80	.....	.....	18.95	17.80	23.10	24.20	27.95	37.70	40.95	.....
20	42.80	.....	30.60	26.10	18.95	17.70	19.80	23.80	26.50	29.10	37.20	42.15
25	48.90	.....	26.65	28.50	21.10	13.15	20.45	25.10	27.00	31.30	37.00	43.10
Eom	48.80	36.60	.....	24.40	18.05	.....	21.60	25.30	28.80	33.95	39.10	44.50

1957

5	45.40	47.80	49.35	52.65	39.35	50.35	36.85	45.05	48.50	48.30	39.65	38.90
10	46.40	48.35	50.80	45.25	48.75	50.10	36.05	47.50	48.85	48.05	39.60	37.35
15	47.35	48.85	51.35	45.40	48.35	50.35	34.90	47.60	40.75	48.05	39.50	37.20
20	48.25	49.50	52.25	45.10	47.30	52.05	42.60	40.05	48.80	40.55	39.45	37.50
25	46.00	50.30	52.90	46.35	48.55	50.60	43.85	40.70	47.50	40.25	39.00	36.35
Eom	47.15	50.40	46.50	47.60	50.40	38.30	44.60	48.25	47.70	39.80	39.05	38.00

Summit County

Su-3. Goodyear Tire & Rubber Co. Akron. Lat 41°03'09", long 81°28'00". Drilled unused water-table well in gravel, diam 20 in, depth 140 ft. MP, floor of instrument shelter, 1.76 ft above lsd. Highest water level 13.70 below lsd, May 18, 1956; lowest 55.87 below lsd, Oct. 18-20, 26-28, 1944. Records available: 1943-57. Water levels affected by pumping.

Su-3--Continued.

## Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	29.90	26.10	21.05	17.30	15.40	14.70	19.80	28.00	33.40	37.40	34.30	31.55
10	29.20	25.05	20.00	16.80	15.05	16.75	20.20	29.50	33.80	38.75	34.80	30.05
15	28.55	24.40	19.30	16.25	13.90	19.25	21.55	30.70	34.50	39.30	35.20	28.70
20	27.90	23.85	19.00	15.95	13.95	19.40	22.60	31.90	34.80	37.30	35.60	27.65
25	27.40	23.20	18.55	15.70	14.10	19.60	22.80	.....	35.05	35.60	35.05	26.60
Eom	26.75	21.65	17.95	15.40	14.25	19.60	25.45	34.00	36.30	34.50	33.20	25.40

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	24.80	20.70	17.90	15.65	15.55	12.60	24.45	33.95	40.50	45.65	44.00	31.00
10	24.05	20.05	17.50	14.95	16.25	18.95	26.70	35.45	41.85	46.40	40.55	29.70
15	23.40	19.60	17.15	14.55	16.55	20.10	28.50	37.05	42.95	47.10	37.70	28.70
20	22.85	19.15	16.80	14.30	16.85	21.70	30.00	38.15	43.95	47.80	35.45	27.60
25	21.95	18.70	16.60	14.50	17.25	23.15	31.15	39.40	44.60	48.50	33.65	26.80
Eom	21.25	18.35	16.35	14.90	17.70	23.75	32.90	40.90	45.00	47.70	32.15	25.65

Su-4a. Firestone Tire & Rubber Co. Akron. Lat  $41^{\circ}02'$ , long  $81^{\circ}32'$ . Drilled test artesian well in gravel, diam 6 in, depth 60 ft. MP, floor of instrument shelter, 3.00 ft above lsd. Highest water level 4.15 below lsd, Mar. 12, 1952; lowest 38.05 below lsd, Nov. 5-6, 1955. Records available: 1951-57. Water levels affected by pumping.

## Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1951

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	.....	.....	.....	17.10	22.40	.....	25.68	27.65	14.07
10	.....	.....	.....	.....	10.90	16.10	18.20	23.00	22.90	26.35	27.60	11.25
15	.....	.....	.....	.....	8.90	17.40	19.10	22.60	23.85	26.86	23.85	9.33
20	.....	.....	.....	.....	10.40	18.35	20.05	21.85	23.90	27.35	20.84	9.05
25	.....	.....	.....	.....	11.75	.....	20.90	.....	24.25	28.00	17.67	7.05
Eom	.....	.....	.....	.....	12.90	20.30	21.75	23.40	24.75	28.63	.....	6.12

1952

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	5.81	4.51	5.28	5.39	8.44	12.17	14.60	14.38	13.45	17.98	20.60	19.54
10	6.28	4.68	5.38	5.60	9.50	13.39	14.09	15.27	14.40	18.47	.....	17.69
15	6.33	4.97	4.52	5.34	10.29	14.59	13.68	15.07	15.37	18.60	.....	16.25
20	5.16	5.20	4.82	5.60	11.00	15.72	14.45	14.58	16.35	19.19	.....	15.54
25	5.34	5.14	5.19	6.75	11.49	16.50	13.76	13.36	16.95	20.25	.....	14.80
Eom	4.45	5.16	5.50	7.50	11.88	17.18	14.73	14.55	17.58	21.08	21.10	13.79

1953

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	13.40	7.27	7.04	5.78	9.95	10.90	.....	.....	24.95	27.65	30.35	32.85
10	12.95	7.56	6.66	5.83	10.65	11.70	.....	.....	24.50	28.55	30.85	31.95
15	11.59	7.45	6.98	6.21	11.35	12.00	.....	23.70	25.30	28.85	30.50	30.55
20	8.71	7.62	6.93	6.97	10.70	11.80	.....	24.30	26.10	29.25	31.40	29.20
25	7.97	7.25	6.98	8.00	7.85	12.75	.....	24.90	26.55	30.10	32.25	28.35
Eom	7.07	7.21	6.70	9.05	9.50	.....	20.75	23.10	.....	30.50	31.70	27.10

1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	26.35	.....	17.30	10.05	10.40	17.85	25.45	32.00	27.25	33.65	23.70	24.50
10	26.40	.....	16.25	9.75	10.85	19.08	26.95	32.20	29.95	31.80	24.85	23.45
15	26.40	22.30	15.30	8.95	12.45	20.45	25.75	31.40	31.45	31.60	25.40	22.60
20	26.35	21.50	14.75	8.45	13.55	22.15	26.85	29.30	32.25	18.80	27.25	21.75
25	25.75	20.75	13.95	9.70	14.85	24.25	28.90	28.30	33.25	20.10	26.75	20.80
Eom	.....	20.50	10.75	10.35	16.40	25.35	31.05	27.45	33.65	22.15	25.25	19.40

1955

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	17.75	13.40	7.25	....	12.40	19.55	25.30	29.50	31.45	36.00	38.05	15.15
10	14.30	12.20	7.35	7.15	12.20	....	23.35	30.35	33.10	36.55	37.70	14.70
15	14.05	10.35	6.60	9.30	15.45	21.55	23.20	31.05	34.20	37.30	37.40	14.60
20	14.30	10.50	6.75	9.30	18.10	21.95	24.70	32.10	34.70	37.15	27.40	14.05
25	14.35	8.75	....	9.30	19.20	23.75	26.20	33.00	35.70	36.95	18.70	13.10
Eom	14.10	8.55	....	10.80	17.30	25.65	28.15	33.35	36.60	37.30	16.30	11.95

1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	11.60	7.30	....	5.55	....	....	9.05	....	16.70	25.75	25.30	19.25
10	11.10	6.05	....	....	....	....	9.30	17.50	17.60	26.05	24.30	18.00
15	10.25	5.95	....	....	....	14.00	9.60	17.05	21.30	26.10	23.90	16.80
20	9.85	5.55	5.75	....	....	12.50	14.25	16.60	22.55	28.25	23.10	15.60
25	9.55	5.50	5.60	....	....	11.15	....	20.30	22.95	28.80	22.00	14.40
Eom	8.50	....	....	....	....	13.30	....	19.35	23.70	29.40	20.45	13.80

1957

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	13.75	....	....	....	....	....	13.20	....	27.20	29.95	32.80	24.15
10	....	....	....	....	....	....	10.40	....	28.70	30.55	33.80	18.20
15	....	....	7.50	....	12.50	....	....	....	30.20	31.75	33.65	15.35
20	13.35	9.35	7.30	....	11.45	....	....	....	31.20	33.05	30.90	14.00
25	10.95	9.30	7.60	....	12.35	....	....	26.65	27.95	33.30	27.30	12.05
Eom	10.55	8.95	....	....	....	16.15	....	28.00	26.35	32.65	25.55	10.70

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Trumbull County

T-2. Copperweld Steel Co. Mahoning Ave., Warren. Lat  $41^{\circ}16'00''$ , long  $80^{\circ}50'30''$ . Drilled unused artesian well in sandstone, diam 10 in, depth 124 ft. MP, floor of instrument shelter, 3.00 ft above lsd. Highest water level 25.95 below lsd, June 20, 1949; lowest 58.00 below lsd, Sept. 13, 1957. Records available: 1946-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	46.05	47.20	46.20	46.05	46.30	50.15	51.45	54.65	49.70	48.75	49.00	47.40
10	45.75	47.70	46.30	45.60	47.40	51.35	54.20	55.25	48.05	47.65	48.70	48.10
15	41.95	47.50	46.00	45.70	48.75	54.80	54.10	50.10	50.30	47.55	48.75	48.30
20	46.10	47.70	47.25	43.45	47.10	54.25	53.90	48.45	48.40	48.80	47.90	48.85
25	46.50	47.85	46.60	45.10	49.85	54.85	53.95	48.00	47.90	49.05	47.50	46.30
Eom	47.25	46.90	47.00	45.45	52.10	53.40	53.90	50.00	48.75	49.40	48.15	46.50
1957												
5	47.40	46.45	47.00	46.65	47.00	49.90	40.65	55.70	57.10	56.40	50.35	50.60
10	47.65	46.85	47.40	44.30	50.45	50.40	38.05	57.45	57.30	53.50	50.80	50.05
15	48.30	48.35	48.45	42.20	48.85	53.95	39.50	57.80	56.95	50.70	50.95	49.20
20	48.35	47.90	47.50	45.70	45.90	55.90	49.40	57.05	57.40	50.20	50.00	49.65
25	49.90	48.00	46.75	48.45	49.25	55.90	52.35	55.90	56.40	51.50	48.65	48.20
Eom	49.00	47.95	49.05	47.85	49.75	53.10	54.90	56.15	55.35	50.35	50.50	47.95

Tuscarawas County

Tu-1. Everett Waltz. Near Strasburg. Lat  $40^{\circ}37'09''$ , long  $81^{\circ}32'00''$ . Drilled unused water-table well in gravel, diam 4 in, depth 23 ft. MP, floor of instrument shelter, 0.90 ft above lsd. Highest water level 8.03 below lsd, Feb. 8, 1952; lowest 13.87 below lsd, Sept. 30-Oct. 3, 1954. Records available: 1946-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	13.56	12.77	10.27	10.07	10.12	8.51	9.67	10.83	11.08	12.04	12.60	12.91
10	13.60	11.89	9.82	10.25	9.74	8.64	9.75	10.04	11.28	12.15	12.63	12.83
15	13.61	11.59	9.66	10.48	8.89	9.09	....	10.22	11.44	12.26	12.73	12.67
20	13.64	11.41	9.86	10.59	9.26	9.39	....	10.52	11.57	12.36	12.79	12.62
25	13.66	10.51	9.86	10.68	9.37	9.45	....	10.69	11.72	12.44	12.80	12.63
Eom	13.23	10.40	9.90	10.42	8.97	9.28	10.58	10.79	11.88	12.55	12.87	.....
1957												
5	.....	12.13	11.81	11.17	.....	10.87	10.61	11.82	12.56	12.83	13.08	13.08
10	.....	12.05	11.81	10.00	.....	11.06	10.76	11.97	12.67	12.86	13.10	12.42
15	.....	11.80	11.54	9.61	.....	11.22	10.96	12.14	12.69	12.91	13.11	12.46
20	.....	11.87	11.50	9.61	.....	11.35	11.20	12.22	12.73	12.95	13.03	12.31
25	.....	11.95	11.57	9.72	.....	11.49	11.40	12.33	12.64	12.97	13.04	11.77
Eom	12.15	11.88	11.71	9.91	10.65	10.95	e11.61	12.45	12.75	13.04	13.07	11.43

e Estimated.

Washington County

Wa-1. Mariette Osteopathic Clinic. 4th and Putnam Sts., Marietta. Lat  $39^{\circ}25'$ , long  $81^{\circ}27'$ . Drilled unused water-table well in gravel, diam 6 in, depth 42 ft. MP, floor of instrument shelter, 4.80 ft above lsd. Highest water level 16.57 below lsd, Mar. 25, 1945; lowest 30.70 below lsd, Sept. 9, 1942. Records available: 1942-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	28.70	27.95	24.10	21.90	23.75	23.20	25.95	27.10	27.40	28.05	28.40	28.80
10	28.75	26.85	22.15	....	23.90	24.30	26.10	25.50	27.15	28.00	28.50	28.80
15	28.80	26.25	20.95	22.60	22.95	25.10	26.30	26.20	27.65	28.05	28.55	28.30
20	28.85	25.15	21.20	23.25	23.00	25.20	26.60	26.30	27.50	28.15	28.60	27.70
25	28.90	25.35	22.10	23.85	23.90	25.60	26.80	26.55	27.60	28.25	28.65	27.70
Eom	28.85	23.80	22.05	24.00	23.70	25.50	26.65	27.40	27.75	28.35	28.70	27.60
1957												
5	27.85	26.65	26.40	26.80	25.00	26.60	27.40	28.40	28.95	29.00	29.15	29.15
10	28.00	26.50	26.70	24.30	25.50	26.90	27.55	28.50	29.10	29.05	29.20	28.65
15	27.85	25.75	26.70	23.65	26.05	27.15	27.75	28.70	29.20	29.10	29.15	28.45
20	28.05	26.25	26.85	23.85	25.95	27.40	27.90	28.75	29.20	29.15	29.10	28.35
25	27.55	26.50	26.95	24.30	26.15	27.55	28.05	28.85	29.00	29.15	29.05	27.80
Eom	26.70	26.65	27.05	24.20	26.35	27.60	28.25	29.00	28.95	29.20	29.10	27.00

Wayne County

Wn-1a. Morton Salt Co. Lat  $40^{\circ}58'$ , long  $81^{\circ}46'$ . Drilled unused water-table well in gravel, diam 10 in, depth 109 ft. MP, floor of instrument platform, 4.84 ft above lsd. Highest water level 76.25 below lsd, July 14, 1957; lowest 88.85 below lsd, Sept. 23, 1953. Records available: 1952-57. Water levels affected by pumping.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1952

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	.....	.....	.....	.....	.....	.....	78.95	83.10	83.90	85.20	85.50	85.45
10	.....	.....	.....	.....	.....	80.00	81.55	83.60	84.45	85.30	85.95	85.55
15	.....	.....	.....	.....	.....	79.95	82.30	83.60	84.40	85.60	86.00	85.40
20	.....	.....	.....	.....	.....	81.90	82.80	83.15	.....	85.95	85.90	85.45
25	.....	.....	.....	.....	.....	82.55	83.20	82.80	85.20	.....	86.00	84.30
Eom	.....	.....	.....	.....	80.40	.....	83.60	84.10	84.50	.....	85.75	85.10

1953

5	85.05	85.60	85.50	85.60	86.20	86.05	86.10	87.45	87.90	88.40	88.70	88.35
10	.....	85.80	85.20	86.35	86.55	87.60	87.80	88.00	88.35	88.60	88.10	.....
15	.....	85.40	85.55	85.70	86.20	85.85	87.65	87.85	88.05	88.45	88.35	87.95
20	84.85	85.70	85.75	85.60	86.10	86.60	87.35	87.90	88.15	88.65	88.50	87.85
25	.....	85.55	85.50	85.65	86.60	86.80	87.55	87.95	88.40	88.85	87.90	86.75
Eom	.....	85.70	85.55	85.50	84.80	87.05	87.40	87.90	88.60	88.15	88.20	86.70

1954

5	85.60	86.75	87.35	87.00	81.75	79.75	82.60	85.70	85.65	85.80	85.40	84.15
10	86.90	86.95	86.60	86.95	88.25	81.95	84.60	85.95	85.45	85.55	85.10	84.20
15	.....	87.20	87.35	86.55	81.05	82.80	85.20	.....	85.95	85.00	84.05	83.90
20	.....	87.25	86.95	86.50	80.75	83.65	85.25	86.25	85.75	85.20	84.60	84.55
25	86.35	86.75	87.00	83.65	81.15	84.05	84.80	.....	85.90	84.95	84.55	83.40
Eom	87.35	86.70	87.10	84.10	80.45	84.05	85.50	85.25	86.10	84.60	83.60	83.60

1955

5	82.50	84.15	83.85	83.35	83.70	83.50	81.70	83.85	83.80	84.15	83.40	83.95
10	83.55	83.70	83.60	84.10	83.60	83.50	81.25	83.85	.....	84.20	82.95	84.25
15	83.60	83.90	83.60	84.00	83.90	84.05	81.40	84.05	84.40	83.70	83.10	83.95
20	84.15	84.60	83.85	83.35	83.65	84.05	82.65	84.05	84.20	84.00	83.15	84.35
25	83.75	84.35	83.65	83.65	83.80	84.30	83.25	84.35	84.60	83.70	82.30	81.65
Eom	84.00	83.80	83.80	84.25	82.75	83.75	83.70	84.50	84.50	83.35	84.15	.....

1956

5	.....	84.10	84.25	84.10	83.95	83.75	79.60	83.25	81.60	82.70	82.25	82.20
10	.....	84.00	84.65	83.80	84.00	84.00	81.20	81.70	80.75	82.60	82.95	82.45
15	.....	83.85	84.65	83.70	83.70	83.80	82.10	81.35	81.05	81.65	82.95	82.40
20	.....	84.05	84.65	84.65	84.35	82.50	82.45	81.80	81.95	82.25	83.25	82.45
25	84.10	84.00	84.40	84.70	84.45	82.15	82.70	81.70	82.25	82.80	80.45	80.25
Eom	84.65	84.30	84.25	83.45	82.50	80.45	83.35	81.80	82.40	82.25	82.30	78.95

1957

5	81.40	82.50	.....	.....	.....	.....	76.75	77.35	77.85	79.25	81.50	81.40
10	82.10	82.05	.....	.....	.....	.....	77.40	77.15	78.35	79.35	80.75	81.75
15	81.90	.....	.....	.....	.....	.....	77.05	77.10	77.40	77.85	82.15	82.60
20	81.25	.....	.....	.....	.....	.....	77.40	77.40	78.70	81.05	81.75	82.20
25	82.00	.....	.....	.....	.....	.....	77.40	77.30	79.10	81.85	82.30	78.75
Eom	82.15	.....	.....	.....	.....	77.65	77.05	77.60	78.20	81.95	77.85	77.85

5	.....	21.60	21.50	.....	12.25	.....	.....	.....	20.50	16.25	19.15	18.55
10	.....	20.80	20.60	.....	15.95	.....	.....	19.75	21.35	17.00	16.80	14.40
15	22.30	21.55	21.20	11.55	.....	17.15	.....	20.30	19.85	17.70	18.75	14.20
20	e23.05	22.05	21.20	11.10	.....	18.05	.....	20.10	21.15	.....	18.35	15.50
25	22.35	21.55	20.95	.....	.....	17.60	.....	19.05	.....	.....	18.15	11.55
Eom	21.75	21.70	.....	13.10	.....	.....	.....	20.75	14.65	18.50	16.30	13.45

e Estimated.

## References

- Kaser, Paul, 1950, Ground-water levels in Ohio, 1948: Ohio Div. of Water Bull. 21.  
\_\_\_\_\_, 1952, Ground-water levels in Ohio, 1949-50: Ohio Div. of Water Bull. 25.  
\_\_\_\_\_, 1954, Ground-water levels in Ohio, 1951-52: Ohio Div. of Water Bull. 28.  
\_\_\_\_\_, 1956, Ground-water levels in Ohio, 1953-54: Ohio Div. of Water Bull. 29.  
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## PENNSYLVANIA

By Stanley M. Longwill

The observation-well program in Pennsylvania was continued during 1956-57 in cooperation with the Topographic and Geologic Survey, Pennsylvania Department of Internal Affairs. Figure 12 shows the location of observation wells included in this report.

### Well-Numbering System

The well-numbering system includes an identification number followed by a location number in parentheses. The well-identification number consists of a two-letter symbol for the name of the county and a serial number. For example, Mg-83 identifies the 83d well recorded in Montgomery County. The well-location number is composed of two parts separated by a hyphen--J22b-1205. "J22b" refers to the coordinate system used to identify the individual  $\frac{1}{2}$ -minute quadrangle. The letters A through L (except I) appear along the west border of the map of Pennsylvania. The numbers 1 through 25 appear along the north border. Each pair of coordinates designates a 15-minute quadrangle, "a" representing the northwest quarter, "b" the northeast, "c" the southwest, and "d" the southeast. "1205" identifies the northwest corner of a one-hundred square-mile area within the  $\frac{1}{2}$ -minute quadrangle designated by "J22b". The first two figures "12" refer to the number of tenths of a mile between the northern boundary of the  $\frac{1}{2}$ -minute quadrangle and the northern boundary of the one-hundredth square-mile area. The last two figures "05" represent the distance between the western boundaries of the  $\frac{1}{2}$ -minute quadrangle and the one-hundredth square-mile area. Thus, a well having the location number J22b-1205 is situated between 1.2 and 1.3 miles south and between 0.5 and 0.6 mile east of the north and west boundaries, respectively, of the  $\frac{1}{2}$ -minute quadrangle designated "J22b".

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum.

#### Allegheny County

Ag-147g(H3b-0428). West View Municipal Water Authority, Neville Island, Pittsburgh. Lat  $40^{\circ}29'30''$ , long  $80^{\circ}04'20''$ . Drilled observation water-table well in sand and gravel of Pleistocene age, diam 6 in, depth 60 ft. Lsd, 725 ft above msl. MP, top of casing, 2.50 ft above lsd. Highest water level 23.20 below lsd, Aug. 4, 1950 (previously reported as 23.30); lowest 46.6 below lsd, Feb. 28-Mar. 2, 1955. Records available: 1946-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	43.2	44.9	45.8	43.5	42.4	42.8	43.7	38.3	39.0	37.9	37.9	39.4
10	45.2	45.6	43.5	43.9	42.3	43.4	42.3	33.5	38.2	37.2	38.8	39.5
15	45.1	45.7	43.9	43.9	43.0	44.8	40.6	35.4	38.9	37.8	38.5	39.4
20	45.3	45.7	44.6	43.8	43.6	44.9	41.6	35.8	...	37.7	38.6	40.6
25	45.6	45.7	43.7	42.5	43.2	43.7	41.0	38.3	38.4	38.0	38.7	e40.2
Eom	h43.8	45.6	44.2	42.3	43.0	43.9	41.9	37.0	38.2	37.7	38.9	40.1

1957

5	39.6	41.0	39.9	39.1	38.2	37.8	37.7	34.9	36.0	35.4	32.0	32.9
10	39.5	40.5	39.5	38.8	37.6	38.4	37.1	34.9	35.8	34.7	30.9	37.8
15	39.7	40.7	39.1	39.0	38.1	37.7	37.5	35.4	35.7	34.9	30.5	...
20	40.0	41.4	38.6	35.7	38.3	37.9	38.3	35.5	35.5	...	...	36.4
25	41.4	41.3	38.5	38.3	38.4	37.1	37.1	35.3	35.6	29.5	32.0	37.2
Eom	41.6	40.6	38.1	38.5	38.2	37.0	33.8	35.6	35.3	30.9	31.8	36.8

e Estimated.

h Tape measurement.

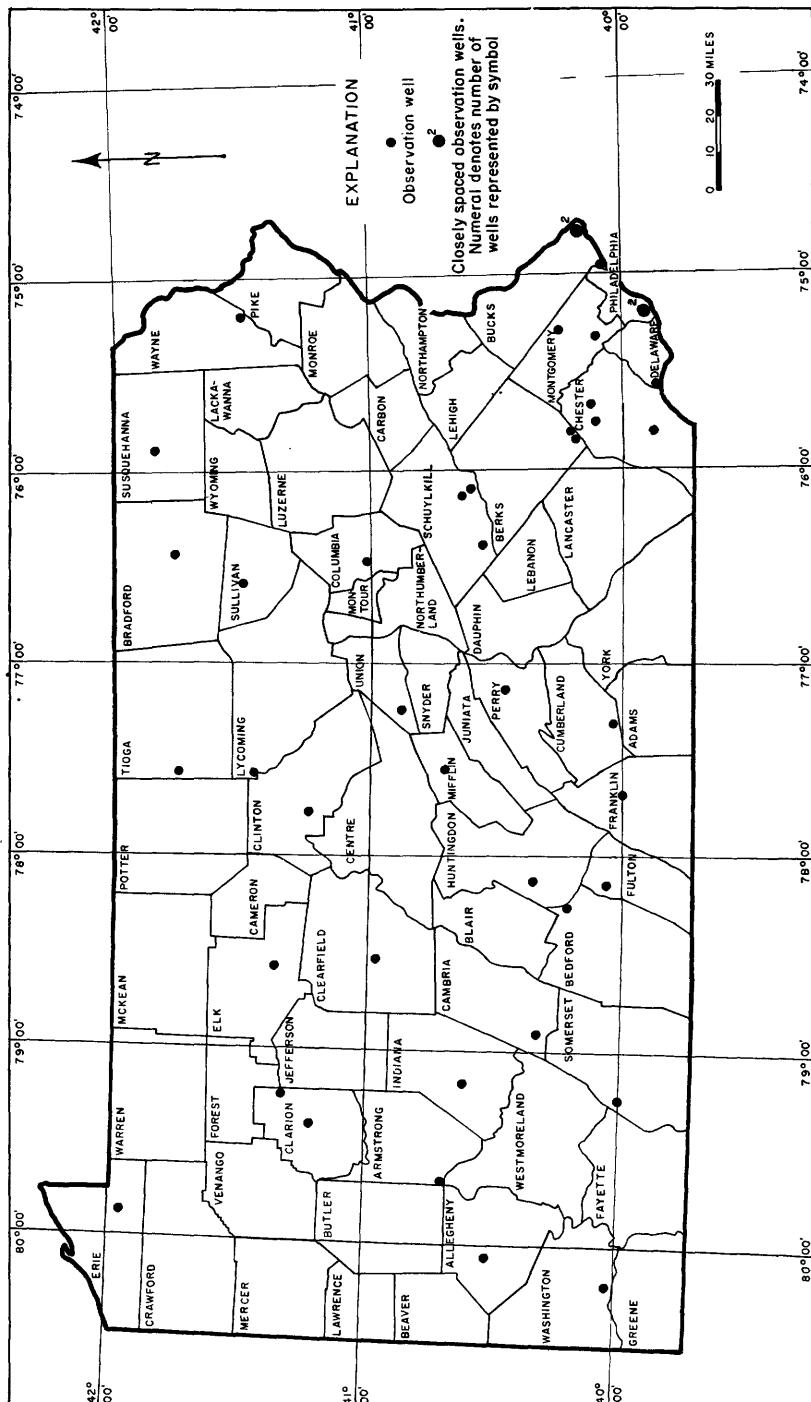


Figure 12.—Location of observation wells in Pennsylvania, 1956-57.

Armstrong County

Ar-2(G5a-4744). Martin J. Cordera. Schenley. Lat  $40^{\circ}40'50''$ , long  $79^{\circ}39'50''$ . Drilled unused water-table well in sand and gravel of Pleistocene age, diam 6 in, depth 82 ft. Lsd, about 780 ft above msl. MP, top of casing, 0.30 ft above lsd. Highest water level 27.83 below lsd, Mar. 29, 1950; lowest 39.95 below lsd, Oct. 28, 1953. Records available: 1949-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4, 1956	38.17	July 11, 1956	36.08	Jan. 9, 1957	37.45	July 10, 1957	37.90
11	38.29	18	35.49	16	37.73	17	38.7
18	38.68	25	36.28	23	30.20	24	39.3
25	39.14	Aug. 1	37.76	30	31.15	31	39.3
Feb. 1	37.60	8	34.87	Feb. 6	35.45	Aug. 7	39.1
8	33.12	15	35.29	13	33.77	14	39.4
15	34.05	22	36.56	20	37.09	21	39.4
22	34.99	29	37.47	27	37.06	28	39.6
29	29.00	Sept. 5	35.85	Mar. 6	35.70	Sept. 4	39.9
Mar. 7	28.89	12	37.03	13	35.01	11	40.3
14	30.84	19	36.90	20	36.38	18	40.3
21	34.88	26	37.56	27	36.75	25	39.8
28	34.77	Oct. 3	38.45	Apr. 3	35.98	Oct. 2	40.3
Apr. 4	30.26	10	37.60	10	28.59	9	40.4
11	30.00	17	38.57	17	34.11	16	40.4
18	33.60	24	38.88	24	34.41	23	40.4
25	34.74	31	38.69	May 1	35.50	30	40.1
May 2	34.53	Nov. 7	38.70	8	36.53	Nov. 6	40.2
9	34.95	14	38.75	15	37.23	13	40.2
16	29.52	21	37.63	22	36.11	22	39.5
23	34.64	28	37.68	29	38.28	27	39.7
30	36.66	Dec. 5	38.14	June 5	38.37	Dec. 4	39.5
June 6	35.09	12	33.79	12	38.98	11	40.7
13	38.07	19	33.99	19	38.98	18	38.7
20	37.06	26	34.54	26	38.27	25	35.2
27	36.27	Jan. 2, 1957	36.39	July 3	37.32	31	35.9
July 4	35.51						

Bedford County

Bd-3(J10b-2363). W. M. Hoffman. Norris and Liberty Sts., Saxton. Lat  $40^{\circ}12'50''$ , long  $78^{\circ}15'20''$ . Dug unused water-table well in shale of Chemung formation or Portage group, diam 5 ft, depth 58 ft, cased with stone. Lsd, about 895 ft above msl. MP, top of hole in cover, 0.30 ft above lsd. Highest water level 44.08 below lsd, Apr. 16, 1948; lowest 53.69 below lsd, Feb. 13, 1948. Records available: 1941-57.

Jan. 6, 1956	52.63	July 6, 1956	51.78	Jan. 4, 1957	50.54	July 5, 1957	51.74
13	52.74	13	51.72	11	50.74	12	51.96
20	52.80	20	51.80	18	50.98	19	52.02
27	52.84	27	51.70	25	51.04	26	52.18
Feb. 3	50.96	Aug. 3	51.68	Feb. 1	51.16	Aug. 2	52.28
10	50.16	10	50.32	8	50.60	9	52.30
17	50.68	17	50.68	15	50.04	16	52.42
24	50.88	24	50.92	22	50.48	23	52.54
Mar. 2	50.68	31	51.10	Mar. 1	50.58	30	52.62
9	47.92	Sept. 7	51.34	8	50.46	Sept. 6	52.78
16	49.08	14	51.42	15	50.24	13	52.82
23	49.74	21	51.52	22	50.50	20	52.88
30	50.26	28	51.62	29	50.72	27	52.94
Apr. 6	48.64	Oct. 5	51.82	Apr. 5	50.10	Oct. 4	53.06
13	48.30	12	52.02	12	48.36	11	53.10
20	49.96	19	52.12	19	49.08	18	53.18
27	50.32	26	51.68	26	49.86	25	53.22
May 4	50.58	Nov. 2	51.60	May 3	50.28	Nov. 1	53.24
11	50.70	9	51.56	10	50.58	8	53.26
18	50.76	16	51.62	17	50.78	15	53.30
25	50.82	23	51.68	24	50.96	22	53.32
June 1	51.04	30	51.84	31	50.98	29	53.32
8	51.12	Dec. 7	51.94	June 7	51.14	Dec. 6	53.34
15	51.28	14	50.94	14	51.28	13	53.24
22	51.68	21	50.40	21	51.42	20	53.18
29	51.48	28	49.98	28	51.64	27	52.60

Berks County

Be-3(J20b-3547). Commonwealth of Pennsylvania. French Creek State Park. Near Elverson. Lat  $40^{\circ}11'50''$ , long  $75^{\circ}47'00''$ . Drilled unused water-table well in Vintage dolomite, diam 4 in, depth 37 ft (previously reported as 39 ft). Lsd, about 540 ft above msl. MP, top of casing, at lsd. Highest water level 22.43 below lsd, June 22, 1948; dry, Nov. 19-Dec. 24, 1954, Nov. 30, Dec. 7, 1956, Aug. 23-Dec. 29, 1957. Records available: 1948-57. Measurements by George L. Clouser.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6, 1956	35.79	June 29, 1956	28.68	Jan. 11, 1957	35.64	June 28, 1957	33.21
13	35.98	July 6	29.23	18	35.40	July 5	33.59
20	35.11	13	29.76	25	35.48	12	34.09
27	35.42	20	30.48	Feb. 1	35.32	19	34.56
Feb. 3	35.40	27	30.92	8	35.13	26	34.01
10	34.82	Aug. 3	31.56	15	34.75	Aug. 2	35.38
17	34.48	10	31.94	22	34.62	9	35.75
24	34.18	24	33.00	Mar. 1	34.32	16	36.18
Mar. 2	33.72	31	33.42	8	34.06	23	(f)
9	33.66	Sept. 7	33.81	15	33.88	30	(f)
23	32.23	14	34.12	22	33.66	Sept. 6	(f)
30	31.06	21	34.56	29	33.64	13	(f)
Apr. 6	30.19	28	34.86	Apr. 5	32.69	20	(f)
13	28.97	Oct. 19	35.75	12	32.71	27	(f)
20	28.16	26	36.21	19	32.62	Oct. 4	(f)
27	27.48	Nov. 2	36.27	26	32.36	11	(f)
May 4	26.79	9	36.18	May 3	32.13	18	(f)
11	26.54	16	36.69	10	31.93	25	(f)
18	26.24	30	(f)	17	32.03	Nov. 1	(f)
25	26.70	Dec. 7	(f)	24	31.98	8	(f)
June 1	26.59	14	36.24	31	32.16	15	(f)
8	26.98	21	35.72	June 7	32.18	22	(f)
15	27.58	28	35.43	14	32.50	Dec. 29	(f)
22	28.92	Jan. 5, 1957	35.40	21	32.88		

f Dry.

Be-4(J20b-4426). Commonwealth of Pennsylvania. French Creek State Park. Near Elverson. Lat  $40^{\circ}11'00''$ , long  $75^{\circ}49'30''$ . Dug unused water-table well in sandstone or shale of Stockton formation, diam 4 ft, depth 20 ft. Lsd, 694 ft above msl. MP, top edge of hole in cover, at lsd. Highest water level 4.88 below lsd, Mar. 23, 1956; dry, Aug. 12, 1949. Records available: 1948-57. Measurements by George L. Clouser.

Jan. 6, 1956	15.02	July 6, 1956	13.24	Jan. 11, 1957	11.99	June 21, 1957	14.22
13	14.03	13	13.58	18	12.28	28	14.59
27	14.64	20	14.63	25	10.64	July 5	14.96
Feb. 3	13.03	27	13.82	Feb. 1	10.10	12	15.30
10	7.50	Aug. 3	14.32	8	9.28	19	15.54
17	8.31	10	14.56	15	9.15	26	15.80
24	8.30	24	14.80	22	10.86	Aug. 2	15.88
Mar. 2	8.43	31	15.02	Mar. 1	9.63	9	16.13
9	6.45	Sept. 7	15.16	8	9.76	16	16.41
23	4.88	14	15.19	15	10.07	23	17.60
30	5.87	21	15.22	22	10.29	30	16.70
Apr. 6	7.70	28	15.36	29	11.10	Sept. 6	16.78
13	6.13	Oct. 19	15.51	Apr. 5	6.27	13	16.96
20	8.06	26	14.02	12	6.65	20	17.02
27	9.98	Nov. 2	14.98	19	9.32	27	17.11
May 4	10.34	9	11.89	26	10.21	Oct. 4	17.28
11	8.44	16	13.02	May 3	10.44	11	17.44
18	9.59	30	12.41	10	11.56	25	17.92
25	11.25	Dec. 7	12.82	17	12.36	Nov. 1	17.88
June 1	11.62	14	11.69	24	12.78	8	18.32
8	10.84	21	9.09	31	13.56	15	18.11
15	11.77	28	8.45	June 7	13.47	22	18.06
22	11.70	Jan. 5, 1957	11.08	14	13.86	Dec. 29	10.08
29	12.79						

Bradford County

Br-2(B18c-7333). C. Holon. East Towanda. Lat  $41^{\circ}46'00''$ , long  $76^{\circ}26'00''$ . Dug unused water-table well in shale of Chemung formation or drift of Pleistocene age, diam 30 in, depth 64 ft, cased with brick. Lsd, about 820 ft above msl. MP, top of wooden platform, 0.80 ft above lsd. Highest water level 17.00 below lsd, May 25, 1947; lowest 61.70 below lsd, Feb. 15, 1942. Records available: 1931-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1, 1956	43.02	July 7, 1956	46.21	Jan. 13, 1957	37.74	July 14, 1957	46.10
8	44.38	14	46.93	20	39.92	20	46.70
15	42.10	22	47.74	27	37.78	27	46.83
22	43.18	28	48.32	Feb. 3	38.93	Aug. 3	47.49
29	44.69	Aug. 4	48.94	10	36.70	7	47.81
Feb. 5	44.76	11	49.47	17	35.77	10	47.50
12	36.61	18	49.96	24	37.73	18	48.31
19	33.45	26	50.56	Mar. 3	33.78	24	48.80
26	35.13	Sept. 1	51.01	10	33.56	Sept. 1	49.44
Mar. 4	33.56	9	51.70	17	30.04	7	49.89
11	30.27	16	52.33	24	30.16	15	50.52
17	29.79	22	52.48	31	29.95	22	51.18
24	29.72	30	52.98	Apr. 7	27.26	29	51.87
31	27.76	Oct. 7	53.48	14	27.02	Oct. 6	52.44
Apr. 8	26.24	14	54.00	21	27.68	13	54.15
15	26.09	21	54.52	28	28.07	21	53.78
21	30.25	28	54.85	May 5	33.55	27	54.22
28	30.28	Nov. 4	44.34	12	37.13	Nov. 3	54.73
May 5	32.62	12	35.94	19	36.52	10	55.12
12	34.62	18	40.23	26	32.18	17	55.47
19	35.30	25	42.37	June 2	37.23	24	55.84
26	38.35	Dec. 2	43.52	8	39.49	Dec. 1	56.31
June 3	40.69	10	43.57	16	41.78	8	58.75
9	41.87	17	32.42	23	43.18	15	57.21
16	43.23	23	30.52	29	44.14	22	57.65
24	44.52	30	29.99	July 7	45.31	29	56.67
30	45.40	Jan. 6, 1957	34.78				

Bucks County

Bk-647(J25a-5506). United States Steel Corp. Fairless Works. Falls Township, 3.3 mi southeast of Morrisville. Lat  $40^{\circ}10'10''$ , long  $74^{\circ}44'10''$ . Drilled unused water-table well in sand and gravel of Wisconsin or Recent age, diam 6 in, depth 62 ft, screened 34-53. Lsd, about 15 ft above msl. MP, top of recorder shelter platform, 1.40 ft above lsd. Highest water level 9.98 below lsd, Mar. 15, 1951; lowest 16.50 below lsd, Aug. 17, 1957. Records available: 1950-57. Measurement discontinued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	15.5	....	15.5	....	14.0	....	14.9	14.8	15.3	15.4	14.9	15.7
10	....	....	15.1	13.9	13.9	....	....	14.8	15.3	15.7	15.2	15.6
15	....	....	14.8	13.7	....	....	....	15.2	15.5	15.7	15.5	15.5
20	....	....	14.7	....	....	....	14.5	15.3	15.3	15.6	15.5	15.0
25	....	....	14.7	h13.1	14.9	....	....	15.2	15.6	15.3	15.6	14.7
Eom	....	....	14.8	13.8	....	15.2	....	15.3	15.3	15.3	15.6	15.4
1957												
5	15.8	16.2	15.5	15.3	15.5	16.0	16.0	16.3	16.0	....	15.5	....
10	15.8	15.8	15.7	14.6	15.8	16.0	16.2	16.4	16.0	....	15.8	....
15	16.0	14.9	15.5	15.0	15.7	16.0	16.2	16.4	15.8	....	15.7	....
20	14.1	15.7	15.2	15.1	15.6	16.2	16.3	16.47	15.6	15.8	....	....
25	14.3	15.9	....	15.4	15.8	16.0	16.3	15.7	15.7	15.6	....	....
Eom	16.2	15.7	15.5	....	16.0	15.7	16.2	15.9	15.9	15.6	....	....

h Tape measurement.

Bk-649(J24b-5665). United States Steel Corp. Fairless Works. Falls Township, 3 mi south of Morrisville. Lat  $40^{\circ}10'08''$ , long  $74^{\circ}45'07''$ . Drilled observation water-table well in sand and gravel of Wisconsin or Recent age, diam 12 in, depth 34 ft. Lsd, about 20 ft above msl. MP, top of recorder shelter platform, 3.80 ft above lsd. Highest water level 14.24 below lsd, Oct. 17, 1955 (previously reported 14.5 below lsd); lowest 19.34 below lsd, Nov. 11, 1957. Records available: 1953-57.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Bk-649(J24b-5665)--Continued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	h18.3	18.3	17.9	17.3	17.2	17.5	18.1	18.1	18.1	18.2	17.7	18.3
10	....	18.0	17.6	16.7	17.1	17.5	17.7	18.0	18.2	18.4	18.0	18.3
15	....	17.9	17.4	16.7	17.3	17.7	17.9	18.2	18.3	18.4	18.2	18.2
20	....	17.7	17.4	16.8	17.5	17.8	18.0	18.2	18.2	18.3	18.1	17.7
25	....	17.8	17.3	17.1	17.7	17.8	17.9	18.1	18.3	18.1	18.2	17.6
Eom	....	17.8	17.4	17.2	17.8	18.0	....	18.2	18.1	18.1	18.2	....

1957

5	....	18.3	....	17.9	17.8	18.3	18.6	18.9	19.0	19.2	19.1	....
10	....	18.2	....	17.0	18.0	18.3	18.7	19.0	19.1	19.0	19.3	....
15	....	17.8	....	17.4	18.0	18.4	18.7	19.0	19.0	19.2	19.1	....
20	....	18.2	....	17.5	18.1	18.6	18.8	19.0	19.0	19.2	18.8	18.7
25	....	....	....	17.6	18.1	18.5	18.8	18.9	19.0	19.1	....	18.1
Eom	18.3	....	18.0	....	18.2	18.4	18.7	19.0	19.2	19.2	....	17.9

h Tape measurement.

Bk-666(J24c-4015). Mack Transportation Co. Andalusia, Bensalem Township. Lat  $40^{\circ}03'58''$ , long  $74^{\circ}58'18''$ . Drilled unused water-table well in Wissahickon formation, diam 8 in, depth 219 ft. Lsd, about 45 ft above msl. MP, top of first plywood platform above casing, 0.30 ft above lsd. Highest water level 6.49 below lsd, Mar. 26, 1956; lowest 13.6 below lsd, Nov. 10, 1953, Aug. 22, 1957. Records available: 1953-57. Measurement discontinued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	11.9	10.8	8.8	....	9.1	....	11.4	11.8	12.2	12.8	....	10.5
10	11.9	9.0	8.4	....	9.3	....	11.5	11.7	12.3	12.9	....	10.5
15	11.6	9.2	....	....	9.6	....	e11.9	12.4	12.9	....	....	10.0
20	11.4	8.2	....	....	10.0	....	....	12.0	12.5	13.0	....	8.4
25	11.4	8.4	....	h8.5	10.3	....	....	....	12.6	12.8	....	8.2
Eom	11.4	8.7	7.6	8.9	....	11.3	....	12.1	12.7	12.4	10.0	8.9

1957

5	9.5	9.3	8.1	7.3	9.0	10.8	12.2	13.0	....	....	....	....
10	9.9	8.2	7.9	6.9	9.5	11.1	12.3	13.1	....	....	....	....
15	9.8	8.3	8.2	7.9	10.1	11.4	12.5	13.3	....	....	....	....
20	10.2	8.9	7.6	8.1	10.3	11.6	12.6	13.4	14.1	....	....	....
25	9.6	9.0	....	8.5	10.4	11.9	12.8	....	....	....	....	....
Eom	9.7	8.9	8.5	...	10.7	11.9	12.9	....	....	....	....	....

e Estimated.

h Tape measurement.

Cambria County

Ca-1(H8c-3343). Johnstown Tribune Publishing Co. Lat  $40^{\circ}19'38''$ , long  $78^{\circ}55'06''$ . Drilled unused water-table well in sandstone of Allegheny formation of Pennsylvanian age, diam 12 to 8 in, depth 45 ft. Lsd, about 1,160 ft above msl. MP, top of casing, 10.00 ft below lsd. Highest water level 16.50 below lsd, Mar. 8, 1956; lowest 26.78 below lsd, July 23, 1953. Records available: 1952-57. Measurements by owner.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5, 1956	20.7	May 24, 1956	19.5	Oct. 11, 1956	20.6	Feb. 28, 1957	18.5
12	20.7	31	18.5	18	20.4	Mar. 7	18.6
19	20.4	June 7	19.2	25	21.0	14	20.4
26	20.2	14	21.0	Nov. 1	20.4	21	21.0
Feb. 2	18.9	21	20.8	8	20.5	28	21.0
9	18.9	28	21.0	15	20.5	Apr. 4	20.8
16	18.6	July 5	20.0	22	20.6	11	20.5
23	19.0	12	20.5	29	20.3	18	21.6
Mar. 1	18.4	19	19.8	Dec. 6	20.8	25	20.3
8	16.5	26	21.9	13	17.7	May 2	22.1
15	17.8	Aug. 2	21.3	20	19.7	9	22.8
22	19.3	9	21.2	27	19.7	16	23.0
29	18.6	16	21.1	Jan. 3, 1957	19.2	23	22.9
Apr. 5	17.3	23	20.8	10	19.3	30	23.0
12	18.4	30	21.3	17	19.3	June 6	24.5
19	19.6	Sept. 6	21.2	24	17.8	13	24.7
26	18.7	13	21.1	31	18.4	20	24.6
May 3	17.6	20	20.7	Feb. 7	18.1	27	24.8
10	17.8	27	20.5	14	18.0	July 5	23.5
17	19.5	Oct. 4	20.6	21	18.9	11	23.5

## Ca-1(H8c-3343)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18, 1957	24.1	Sept. 5, 1957	23.8	Oct. 17, 1957	22.5	Nov. 28, 1957	22.4
25	24.3	12	23.9	24	22.5	Dec. 5	22.1
Aug. 1	24.1	19	23.1	31	23.0	12	21.5
8	24.1	26	22.9	Nov. 7	22.5	19	21.7
15	24.7	Oct. 3	23.4	14	22.7	26	20.7
22	23.4	10	22.6	21	22.0	30	20.5

Chester County

Ch-4(J21c-0838). Richland Rebmann, Jr. West Vincent Township. Lat  $40^{\circ}06'40''$ , long  $75^{\circ}40'30''$ . Dug unused water-table well in Precambrian quartz monzonite, diam 4 ft, depth 32 ft (previously reported as 30 ft), cased with stone. Lsd, about 570 ft above msl. MP, top of concrete base, 0.70 ft above lsd. Highest water level 19.45 below lsd, May 2, 1952; dry, Dec. 13, 1957. Records available: 1951-57.

Apr. 11, 1956	20.93	Nov. 9, 1956	26.09	Mar. 29, 1957	24.47	Aug. 20, 1957	28.69
July 17	25.10	Dec. 4	26.06	Apr. 25	23.50	Sept. 17	29.21
Aug. 16	26.22	Jan. 4, 1957	24.75	May 20	24.35	Oct. 15	29.80
Sept. 13	26.83	30	25.19	June 19	25.78	Nov. 13	30.12
Oct. 11	28.66	Feb. 26	24.60	July 24	27.41	Dec. 13	(f)

f Dry.

Ch-5(J21c-2001). Richard Cadbury. Wallace Township. Lat  $40^{\circ}05'40''$ , long  $75^{\circ}44'50''$ . Dug unused water-table well in Precambrian quartz monzonite, diam 30 in, depth 12 ft, cased with stone. Lsd, about 560 ft above msl. MP, top of wooden cover, 0.30 ft above lsd. Highest water level 1.36 below lsd, Apr. 14, 1956; dry, Nov. 6-Dec. 4, 1954, Oct. 26-Dec. 28, 1957. Records available: 1951-57. Measurements by owner.

Jan. 7, 1956	4.87	July 7, 1956	2.42	Jan. 5, 1957	2.51	July 6, 1957	3.63
14	5.15	13	2.64	12	2.53	13	4.03
21	5.49	21	2.50	19	2.72	20	4.64
28	5.53	28	3.05	26	2.69	27	5.21
Feb. 4	5.25	Aug. 4	3.50	Feb. 2	2.80	Aug. 3	5.81
11	3.15	11	3.86	9	2.36	10	6.45
18	2.39	18	4.30	16	2.26	17	6.95
25	1.98	25	4.65	23	2.33	24	7.31
Mar. 3	2.11	Sept. 1	5.13	Mar. 2	2.25	31	8.0
10	1.90	8	5.52	9	2.12	Sept. 7	8.4
17	1.48	15	5.86	16	2.07	14	8.8
24	1.38	22	6.29	23	2.04	21	9.3
31	1.37	29	6.69	30	2.03	28	9.7
Apr. 7	1.38	Oct. 6	6.97	Apr. 6	1.65	Oct. 5	10.1
14	1.36	13	7.27	13	1.63	12	10.5
21	1.40	20	7.64	20	1.68	19	11.2
28	1.42	27	7.75	27	1.69	26	f11.5
May 5	1.45	Nov. 3	6.23	May 4	1.74	Nov. 2	f11.5
12	1.53	10	5.40	11	1.83	9	f11.5
19	1.57	17	5.38	18	1.92	16	f11.5
26	1.70	24	5.30	25	2.02	23	f11.5
June 2	1.74	Dec. 1	5.27	June 1	2.16	30	f11.5
9	1.88	8	5.36	8	2.27	Dec. 7	f11.5
16	2.04	15	4.68	15	2.42	14	f11.5
23	2.07	22	3.39	22	2.67	21	f11.5
30	2.32	29	2.63	29	3.03	28	10.82

f Dry.

Ch-11(K20b-7632). J. E. Ryan. West Marlboro Township. Lat  $39^{\circ}53'10''$ , long  $75^{\circ}48'50''$ . Dug unused water-table well in Baltimore gneiss, diam 24 in, depth 20 ft, cased with stone. Lsd, about 540 ft above msl. MP, top of manhole cover, at lsd. Highest water level 10.24 below lsd, Mar. 20, 1953; lowest 15.16 below lsd, Sept. 14, 1954. Records available: 1950-57.

Jan. 11, 1956	14.13	Aug. 16, 1956	13.34	Feb. 1, 1957	12.89	July 24, 1957	13.84
Feb. 15	13.16	Sept. 14	13.71	27	12.60	Aug. 20	14.33
Mar. 15	12.86	Oct. 12	14.08	Mar. 29	12.49	Sept. 17	14.58
Apr. 11	12.16	Nov. 9	13.17	May 3	12.23	Oct. 15	14.65
June 15	12.83	Dec. 5	13.31	20	12.53	Nov. 13	14.50
July 17	13.08	Jan. 4, 1957	12.78	June 19	13.11	Dec. 13	13.91

Clarion County

Cr-1(E6a-2560). John G. Meisinger. 614 Wood St., Clarion. Lat  $41^{\circ}12'40''$ , long  $79^{\circ}23'00''$ . Dug unused water-table well in sandstone of Allegheny formation, diam 36 in, depth 28 ft, cased with stone to 15. Lsd, about 1,480 ft above msl. MP, top of manhole cover, 0.50 ft below lsd. Highest water level 11.36 below lsd, Apr. 9, 1938; lowest 21.50 below lsd, Oct. 27, 1953. Records available: 1932-57. Measurements by Pennsylvania Electric Co.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6, 1956	16.48	July 20, 1956	14.90	Jan. 11, 1957	14.94	July 12, 1957	15.97
13	16.38	27	14.86	18	16.02	19	16.95
20	17.21	Aug. 3	14.46	25	12.10	26	16.43
27	17.86	10	12.82	Feb. 1	13.38	Aug. 2	17.23
Feb. 10	12.50	17	12.97	8	13.44	8	17.56
17	12.21	24	14.38	15	12.63	16	17.94
25	12.08	31	14.88	22	13.99	23	17.75
Mar. 2	12.42	Sept. 7	14.78	Mar. 1	12.16	30	18.38
9	11.71	14	15.19	8	13.30	Sept. 6	18.69
16	12.62	21	15.74	15	12.18	13	19.18
23	12.60	28	15.97	22	13.28	20	19.14
29	12.24	Oct. 5	17.04	29	14.02	27	17.21
Apr. 6	11.97	12	16.52	Apr. 5	11.64	Oct. 4	18.40
13	12.53	19	17.35	12	11.84	11	19.25
20	12.26	26	17.86	18	12.84	18	19.49
27	12.07	Nov. 2	18.08	26	12.71	25	18.98
May 11	12.54	9	18.14	May 3	13.73	Nov. 1	18.56
18	12.23	16	18.21	10	15.31	8	19.11
25	14.16	23	17.89	17	15.23	15	18.62
June 1	14.52	30	17.99	24	15.42	22	16.23
8	14.52	Dec. 7	18.04	June 6	16.38	29	16.25
15	16.02	14	13.32	14	16.33	Dec. 6	16.60
22	16.20	21	13.49	21	16.27	13	13.20
29	14.26	28	13.22	28	15.59	20	14.34
July 6	13.30	Jan. 4, 1957	13.85	July 5	14.39	27	12.00
13	14.22						

Cr-3(D7c-2511). Commonwealth of Pennsylvania. Cook Forest Park. Lat  $41^{\circ}20'20''$ , long  $79^{\circ}13'40''$ . Drilled unused water-table well in sandstone of Pottsville or Pocono formation, diam 6 in, depth 130 ft, cased to 12. Lsd, about 1,530 ft above msl. MP, top of casing, 0.80 ft above lsd. Highest water level 40.4 below lsd, May 3, 1957; lowest 92.90 below lsd, Dec. 6, 1952. Records available: 1950-57. Measurements by James D. Lesher and M. K. Bodner.

Date	Water level						
Jan. 6, 1956	68.8	July 6, 1956	44.0	Jan. 4, 1957	59.4	July 5, 1957	47.2
13	67.9	13	43.3	11	57.2	12	50.1
20	67.9	20	44.4	18	54.1	20	53.2
27	67.1	27	44.9	25	61.4	27	55.6
Feb. 3	67.0	Aug. 3	45.2	Feb. 1	48.2	Aug. 2	58.0
10	65.7	10	44.6	8	48.4	10	59.4
17	64.9	17	45.0	15	46.7	16	61.1
24	61.4	25	45.5	22	46.2	24	62.5
Mar. 2	67.4	31	46.3	Mar. 1	45.4	30	64.3
9	63.8	Sept. 7	47.2	8	45.1	Sept. 6	65.7
16	59.0	14	47.4	15	45.7	13	66.8
23	56.7	21	49.0	22	44.4	20	68.5
30	48.5	28	50.4	29	45.4	27	71.4
Apr. 6	45.5	Oct. 5	52.0	Apr. 5	43.3	Oct. 4	71.9
13	46.0	12	54.7	12	40.7	11	73.4
20	46.0	19	56.7	19	40.8	18	73.9
27	45.0	26	58.3	26	40.6	25	75.1
May 4	43.9	Nov. 2	59.7	May 3	40.4	Nov. 1	76.4
11	44.0	9	61.0	10	41.6	8	76.3
18	43.4	16	62.6	17	43.0	15	77.0
25	44.3	23	64.3	24	43.6	22	78.0
June 1	43.7	30	64.7	31	44.2	29	78.1
8	43.8	Dec. 7	65.4	June 7	44.7	Dec. 6	78.6
15	44.7	14	65.7	14	45.7	13	79.2
22	45.1	21	66.1	21	46.6	20	78.5
29	45.6	28	66.4	28	47.2	22	77.0

Clearfield County

Cf-4(F9b-2051). Jared I. McNaul. Curwensville. Lat  $40^{\circ}58'10''$ , long  $78^{\circ}31'30''$ . Dug unused water-table well in sandstone of Allegheny formation, diam 5 ft, depth 30 ft. Lsd, about 1,160 ft above msl. MP, top of 1-in pipe in cover, at lsd. Highest water level 15.57 below lsd, Mar. 5, 1951; lowest 21.30 below lsd, Aug. 31, 1946. Records available: 1946-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2, 1956	20.77	July 10, 1956	18.36	Jan. 7, 1957	19.92	July 8, 1957	20.35
9	20.86	16	19.06	14	19.13	15	20.44
16	20.88	23	18.70	22	19.26	22	20.49
23	20.97	30	18.71	28	19.74	29	20.60
30	20.89	Aug. 6	18.84	Feb. 4	19.86	Aug. 5	20.59
Feb. 6	20.67	13	17.79	11	19.29	12	20.65
13	20.04	20	18.29	18	19.60	19	20.67
20	19.52	29	19.39	25	19.94	26	20.58
27	19.27	Sept. 4	19.72	Mar. 5	19.65	Sept. 2	20.66
Mar. 5	19.39	10	19.78	11	19.61	9	20.67
12	18.29	17	19.98	18	19.67	16	20.74
19	19.88	24	20.16	25	20.89	23	20.68
26	20.69	Oct. 1	20.32	Apr. 1	19.94	30	20.72
Apr. 2	18.62	8	20.25	8	17.27	Oct. 7	20.79
9	18.14	15	19.64	15	18.52	14	20.88
16	19.01	22	20.03	22	19.24	21	20.89
23	19.42	29	20.36	29	19.48	28	20.85
30	19.61	Nov. 5	20.45	May 6	19.73	Nov. 4	20.87
May 7	19.29	12	20.49	13	19.69	12	20.92
14	17.91	19	20.57	20	20.03	18	20.85
21	18.39	26	20.52	27	20.09	25	20.89
28	19.31	Dec. 3	20.39	June 3	20.24	Dec. 2	20.87
June 4	19.73	10	20.37	10	20.29	9	20.83
11	20.01	17	19.72	17	20.28	17	20.74
18	20.00	26	19.27	24	20.24	23	20.73
25	19.56	31	19.49	July 2	20.30	30	19.65
July 3	18.66						

Clinton County

Cn-1(E12b-0653). Commonwealth of Pennsylvania. Sproul State Forest, Renovo. Lat  $41^{\circ}14'20''$ , long  $77^{\circ}46'20''$ . Drilled unused water-table well in sandstone of Pottsville formation, diam 6 in, depth 78 ft, cased to 38. Lsd, about 2,050 ft above msl. MP, hole drilled in pump base, 0.20 ft above lsd. Highest water level 44.0 below lsd, Jan. 13, 1951; lowest 55.72 below lsd, Nov. 14, 1953. Records available: 1950-57. Measurements by Clarence F. Billotte.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7, 1956	50.98	July 7, 1956	48.88	Jan. 5, 1957	49.26	July 6, 1957	51.00
14	50.99	14	49.38	12	49.25	13	50.98
21	51.00	21	49.24	19	49.27	20	50.99
28	51.00	28	49.22	26	49.27	27	51.98
Feb. 4	51.58	Aug. 4	49.26	Feb. 2	49.22	Aug. 3	52.00
11	51.68	11	49.47	9	49.06	10	52.10
18	51.58	18	49.46	16	49.05	17	52.74
25	51.08	25	49.48	23	49.05	24	52.81
Mar. 3	51.05	Sept. 1	48.77	Mar. 2	48.95	31	52.82
10	50.00	8	49.78	9	48.94	Sept. 7	52.84
17	49.90	15	49.75	16	48.92	14	52.86
24	49.99	22	51.29	23	48.95	21	53.45
31	49.01	29	51.31	30	48.92	28	53.47
Apr. 7	45.75	Oct. 6	51.29	Apr. 6	47.71	Oct. 5	53.79
14	46.82	13	51.30	13	47.21	12	53.79
21	47.98	20	52.00	20	47.20	19	53.76
28	47.99	27	51.99	27	46.71	26	53.72
May 5	48.27	Nov. 3	51.50	May 4	46.72	Nov. 2	53.75
12	48.09	10	51.51	11	46.77	9	53.74
19	47.90	17	50.88	18	49.19	16	53.74
26	48.00	24	50.46	25	49.20	23	53.73
June 2	48.08	Dec. 1	50.44	June 1	49.30	30	53.70
9	47.88	8	50.40	8	49.32	Dec. 7	53.68
16	48.28	15	50.42	15	49.40	14	52.35
23	48.26	22	49.24	23	49.70	21	51.60
30	48.28	29	49.26	29	50.05	28	51.50

Columbia County

Co-1(E18c-8318). Fred E. Walters. Fernville. Lat  $41^{\circ}00'10''$ , long  $76^{\circ}27'50''$ . Dug unused water-table well in sand of Pleistocene age, diam 36 in, depth 19 ft, cased with stone. Lsd, about 490 ft above msl. MP, top brass plate in center of platform, 2.40 ft above lsd. Highest water level 4.88 below lsd, Sept. 2, 1933; lowest 14.51 below lsd, Dec. 15, 1931. Records available: 1931-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7, 1956	11.8	July 30, 1956	10.85	Jan. 21, 1957	10.76	July 15, 1957	12.7
14	11.7	Aug. 6	11.55	28	10.8	22	12.7
21	11.96	13	11.28	Feb. 4	10.76	29	12.8
28	12.19	20	11.53	11	10.3	Aug. 5	12.8
Feb. 4	12.32	27	11.85	18	11.1	12	13.1
11	10.39	Sept. 3	11.7	25	10.9	19	13.2
18	10.25	10	11.35	Mar. 4	10.7	26	12.7
25	10.56	17	11.15	11	10.5	Sept. 2	12.7
Mar. 3	10.4	24	10.9	18	10.5	9	12.7
10	10.3	Oct. 1	11.16	25	10.6	16	12.6
17	10.47	8	11.19	Apr. 1	10.7	23	12.7
24	10.54	15	11.51	8	10.8	30	12.8
31	10.8	20	11.53	15	11.2	Oct. 7	13.6
Apr. 7	10.4	29	11.0	22	11.1	14	13.0
16	10.37	Nov. 5	10.6	29	10.8	21	13.0
21	10.78	12	10.9	May 6	10.8	28	13.05
May 5	11.08	18	11.0	13	11.1	Nov. 4	13.3
12	12.48	26	11.3	20	11.0	11	13.5
19	10.77	Dec. 3	11.2	27	11.1	18	13.14
26	11.22	10	11.0	June 3	11.1	25	12.2
June 4	11.18	17	10.5	10	11.9	Dec. 2	12.4
11	11.17	24	10.52	17	12.0	9	12.3
July 9	11.53	31	10.52	24	12.2	16	12.15
17	11.34	Jan. 7, 1957	10.8	July 1	12.1	23	10.9
24	10.87	14	10.9	8	12.1	30	10.3

Cumberland County

Cu-2(J14d-6335). Commonwealth of Pennsylvania. Michaux State Forest. Lat  $40^{\circ}02'03''$ , long  $77^{\circ}18'30''$ . Drilled unused water-table well in sandstone of Loudoun formation of Early Cambrian age, diam 6 in, depth 60 ft. Lsd, about 940 ft above msl. MP, top of recorder shelter platform, 1.80 ft above lsd. Highest water level 10.50 below lsd, May 1, 1952; lowest 33.50 below lsd, Feb. 3, 1955. Records available: 1951-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	25.0	26.2	20.5	....	....	18.3	20.9	e22.1	24.5	26.0	22.7	20.6
10	25.3	25.7	19.6	....	....	18.7	21.2	e22.4	24.8	26.2	21.3	20.6
15	25.5	23.8	....	....	h16.7	19.1	....	e22.6	25.0	26.4	20.6	19.8
20	25.7	22.8	....	....	....	17.1	19.5	....	23.3	25.3	26.6	20.4
25	25.9	21.8	....	....	....	17.6	19.9	....	23.6	25.6	26.6	20.3
Eom	26.0	21.1	....	....	....	17.9	20.4	....	24.1	25.8	25.5	20.3
1957												
5	16.6	17.0	15.7	16.3	16.4	19.9	23.0	26.1	28.5	29.8	30.4	29.8
10	16.9	16.6	15.3	14.4	17.0	20.5	23.6	26.5	28.8	29.9	30.5	29.6
15	17.0	16.3	15.0	14.0	17.6	21.0	24.1	26.9	29.0	30.0	30.5	29.3
20	17.3	16.3	15.0	14.5	18.1	21.5	24.6	27.3	29.3	30.2	30.2	29.0
25	17.2	16.4	15.4	15.3	18.7	22.0	25.1	27.7	....	30.3	29.9	26.7
Eom	17.0	16.2	16.1	15.8	19.4	22.5	25.6	28.1	29.6	30.3	29.8	24.3

e Estimated.

h Tape measurement.

Delaware County

De-3(K21d-2125). Mrs. Hope W. Ebert. Birmingham Township. Lat  $39^{\circ}50'40''$ , long  $75^{\circ}34'10''$ . Dug unused water-table well in gneiss of Wissahickon formation, diam 42 in, depth 22 ft, cased with stone. Lsd, about 260 ft above msl. MP, top of concrete base, 1.80 ft above lsd. Highest water level 7.90 below lsd, Aug. 22, 1955; lowest 19.04 below lsd, Nov. 22, 1954. Records available: 1950-57. Measurements by owner.

## De-3(K21d-2125)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2, 1956	16.74	July 9, 1956	15.67	Jan. 14, 1957	14.19	July 8, 1957	16.23
9	16.81	16	15.79	21	14.53	15	16.42
16	16.93	23	15.08	28	14.73	22	16.62
23	17.03	30	14.69	Feb. 4	14.79	29	16.81
30	17.08	Aug. 2	14.62	11	14.59	Aug. 5	17.00
Feb. 6	16.58	13	14.82	18	14.29	12	17.21
13	15.64	20	15.10	25	14.19	19	17.38
20	14.63	27	15.35	27	14.14	26	17.54
27	13.90	Sept. 3	15.60	Mar. 4	14.10	Sept. 2	17.72
Mar. 5	13.86	10	15.85	11	14.04	9	17.86
12	14.09	17	16.03	18	13.96	16	18.02
19	12.81	24	16.21	25	14.01	23	18.21
26	12.04	Oct. 1	16.36	Apr. 1	14.20	30	18.25
Apr. 2	12.30	8	16.54	8	13.74	Oct. 7	18.30
9	12.65	15	16.72	15	13.30	14	18.36
16	12.61	22	16.88	22	13.53	21	18.45
23	13.16	29	16.96	29	13.91	28	18.50
30	13.59	Nov. 5	15.41	May 6	14.29	Nov. 4	18.40
May 7	13.98	12	14.44	13	14.59	11	18.25
14	14.29	19	14.24	20	14.84	18	18.02
21	14.60	26	14.23	27	15.06	25	17.46
28	14.80	Dec. 3	14.42	June 3	15.29	Dec. 2	17.00
June 4	15.00	10	14.65	10	15.50	9	15.95
11	15.18	17	14.36	17	15.66	16	13.47
18	15.30	24	14.05	24	15.88	23	12.77
25	15.41	31	13.82	July 1	16.07	30	12.23
July 2	15.56	Jan. 7, 1957	13.87				

Elk County

Ek-1(D9d-0909). Mrs. Elizabeth Ernst, Kersey. Lat 41°21'40", long 78°36'20". Drilled unused water-table well in shale of Allegheny formation, diam 4 in, depth 87 ft. Lsd, about 1,900 ft above msl. MP, top of casing, 1.50 ft above lsd. Highest water level 6.62 below lsd, June 11, 1943; lowest 13.43 below lsd, Sept. 24, 1954. Records available: 1941-57.

Date	Water level						
Jan. 6, 1956	11.74	July 6, 1956	10.80	Jan. 4, 1957	10.90	July 5, 1957	11.70
13	11.89	13	10.80	11	11.20	12	11.68
20	12.14	20	10.60	18	11.32	19	11.82
27	12.28	27	10.70	25	10.95	26	12.00
Feb. 3	12.25	Aug. 3	10.90	Feb. 1	11.02	Aug. 2	12.15
10	11.85	10	10.40	8	10.82	9	12.20
17	11.80	17	10.42	15	10.81	16	12.46
24	11.75	24	10.45	22	11.01	23	12.52
Mar. 2	11.25	31	10.52	Mar. 1	10.55	30	12.58
9	11.40	Sept. 7	10.60	8	10.70	Sept. 6	12.72
16	11.43	14	10.70	15	10.64	13	12.78
23	11.60	21	10.82	22	10.52	20	12.79
30	11.44	28	10.85	29	10.68	27	12.65
Apr. 6	11.48	Oct. 5	10.90	Apr. 5	10.32	Oct. 4	12.70
13	11.20	12	10.90	12	10.17	11	12.82
20	11.39	19	10.99	19	10.17	18	12.84
27	11.14	26	11.12	26	10.12	25	12.82
May 4	10.95	Nov. 2	11.15	May 3	10.30	Nov. 1	12.75
15	10.75	9	11.10	10	10.48	8	12.67
18	10.55	16	11.30	17	10.55	15	12.52
25	10.85	23	11.39	24	11.40	22	12.51
June 1	10.47	30	11.35	31	10.85	29	12.22
8	10.30	Dec. 7	11.40	June 7	10.98	Dec. 6	12.38
15	10.85	14	11.02	14	11.27	13	12.15
22	10.85	21	10.77	21	11.48	20	11.75
29	10.82	28	10.60	28	11.52	27	11.60

Erie County

Er-1(B4b-3203). Mrs. Grace P. Estes. Near Carters Corners. Lat 41°57'10", long 79°52'00". Dug unused water-table well in sand of Pleistocene age, diam 4 ft, depth 19 ft. Lsd, about 1,440 ft above msl. MP, top of brass plate on 2 x 8 oak beam, 0.20 ft above lsd. Highest water level 7.22 below lsd, Apr. 20, 1952; dry, Sept. 8-Dec. 1, 1934, Oct. 17-Nov. 14, 1957. Records available: 1931-57. Measurements by Julius Horvath.

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Er-1(B4b-3203)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15, 1956	14.15	Mar. 31, 1957	14.38	Aug. 22, 1957	17.0	Oct. 31, 1957	(f)
Feb. 26	9.72	Apr. 28	10.18	29	17.1	Nov. 7	(f)
Apr. 1	10.93	May 19	15.85	Sept. 5	17.1	14	(f)
May 6	11.23	June 2	17.01	12	17.2	21	17.3
June 3	13.23	30	15.52	19	17.2	28	17.0
Sept. 30	14.84	July 18	14.8	26	17.2	Dec. 5	15.9
Oct. 14	16.27	25	16.2	Oct. 3	17.3	12	14.7
28	16.85	Aug. 1	16.8	10	17.4	19	13.9
Nov. 18	17.13	8	16.9	17	f17.5	26	12.6
Feb. 10, 1957	12.11	15	16.9	24	(f)	31	11.5 <sup>a</sup>

<sup>a</sup> Dry.Franklin County

Fr-2(K13a-0047). U. S. Army. Letterkenny Ordnance Depot, Chambersburg. Lat 39°59'59", long 77°39'38". Drilled unused artesian well in Stones River limestone, diam 8 to 6 in, depth 441 ft, cased to 60. Lsd, about 694 ft above msl. MP, top of casing, 0.10 ft above lsd. Highest water level 15.45 below lsd, Jan. 26, 1953 (previously reported as 15.7); lowest 49.4 below lsd, Sept. 9-10, 1957. Records available: 1950-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	48.8	29.7	34.3	24.7	40.1	47.5	43.4	47.3	48.6	46.9	24.1	49.0
10	48.8	24.3	27.6	....	....	48.0	46.0	46.0	48.6	48.2	....	32.1
15	48.8	24.4	26.6	....	46.4	48.3	47.3	47.4	48.7	48.6	....	26.1
20	48.9	24.7	24.0	....	47.2	47.9	47.9	48.1	48.6	48.7	42.3	22.7
25	48.9	27.4	e24.6	....	47.8	34.7	34.0	47.1	48.6	45.5	46.6	23.5
Eom	38.4	....	25.5	....	48.0	47.1	46.2	48.3	48.3	42.2	48.5	27.3
1957												
5	33.3	31.6	27.6	33.6	....	....	46.5	49.1	49.3	49.1	48.1	48.4
10	38.5	29.3	27.1	22.0	46.8	33.9	46.4	48.9	49.4	....	35.2	32.6
15	31.4	26.9	28.9	23.6	47.2	36.6	47.7	49.0	49.0	49.0	35.0 <sup>b</sup>	43.1
20	39.4	29.3	30.9	28.3	47.5	46.1	48.0	....	49.1	38.5	37.2	32.0
25	31.9	35.2	35.8	33.9	47.7	34.8	48.2	49.3	46.4	36.3	46.5	25.4
Eom	32.9	29.6	42.1	....	48.1	42.1	48.6	49.2	48.6	47.2	47.7	21.7

<sup>b</sup> Estimated.Fulton County

Fu-1(J11c-4954). Commonwealth of Pennsylvania. Buchanan State Forest. Lat 40°03'12", long 78°08'52". Drilled unused water-table well in shale or sandstone of Mauch Chunk formation, diam 6 in, depth 116 ft. Lsd, about 1,180 ft above msl. MP, top of casing, at lsd. Highest water level 2.10 below lsd, Apr. 4, 1956; lowest 6.80 below lsd, Nov. 4, 11, 18, 1953. Records available: 1951-57. Measurements by William E. Sprowl.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4, 1956	5.30	May 23, 1956	3.60	Oct. 10, 1956	5.00	Feb. 27, 1957	2.60
11	5.30	30	3.00	17	5.10	Mar. 6	3.10
18	5.40	June 8	3.60	24	2.90	13	3.10
25	5.45	13	4.10	31	3.20	20	3.55
Feb. 1	4.30	20	4.20	Nov. 7	3.10	27	4.10
8	3.25	27	4.00	14	4.00	Apr. 3	3.80
15	2.70	July 4	4.00	21	4.40	10	2.45
22	2.75	11	3.40	28	4.40	17	3.50
29	3.40	18	3.45	Dec. 5	4.60	24	3.30
Mar. 7	3.20	25	3.10	12	3.05	May 1	3.70
14	2.60	Aug. 1	4.00	19	2.70	8	4.20
21	3.00	8	3.00	26	2.45	15	3.40
28	3.00	15	4.20	Jan. 2, 1957	3.60	22	4.25
Apr. 4	2.10	22	3.95	9	4.00	29	4.80
11	2.30	29	4.30	16	3.70	June 5	4.90
18	3.30	Sept. 5	4.90	23	3.60	12	4.75
25	3.60	12	5.10	30	3.70	19	4.80
May 2	3.90	19	4.90	Feb. 6	3.55	26	5.10
9	3.60	26	5.20	13	2.90	July 3	4.80
16	3.70	Oct. 3	5.20	20	3.60	10	4.80

## Fu-1(J11c-4954)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 17, 1957	5.30	Aug. 28, 1957	6.40	Oct. 9, 1957	6.00	Nov. 20, 1957	5.60
24	5.45	Sept. 4	6.40		6.40		5.80
31	5.50	11	6.45		6.30		5.90
Aug. 7	5.80	18	6.30		6.20		5.20
14	6.00	25	6.50	Nov. 6	6.25	18	5.50
21	6.20	Oct. 2	6.10	13	6.10	25	4.90

Huntingdon County

Hu-1(H11c-1559). Fred M. Schell. Near Aitch and Marklesburg. Lat  $40^{\circ}21'10''$ , long  $78^{\circ}08'20''$ . Drilled unused water-table well in sandstone of Chemung formation, diam 6 in, depth 42 ft. Lsd, about 720 ft above msl. MP, top of casing, at lsd. Highest water level 0.00, Mar. 15, 1941; lowest 26.25 below lsd, Oct. 1, 1932. Records available: 1931-57.

Jan. 7, 1956	22.27	June 30, 1956	23.22	Dec. 22, 1956	17.13	June 8, 1957	22.88
14	22.30	July 7	18.98	Jan. 5, 1957	17.97	15	20.92
21	22.30	14	20.96		20.13	22	21.99
28	22.55	21	15.74		20.55	29	19.95
Feb. 4	21.76	28	18.29		21.68	July 6	21.96
11	17.72	Aug. 4	20.94	26	21.60	13	21.90
18	15.42	11	16.87	Feb. 2	21.93	20	22.11
25	18.37	18	19.76	9	19.35	27	22.00
Mar. 3	18.38	25	21.12	16	19.20	Aug. 3	22.99
10	15.16	Sept. 1	21.51	23	20.75	10	22.95
17	16.93	8	21.23	Mar. 2	20.84	20	22.97
25	19.15	15	20.87	9	19.30	24	22.79
31	19.87	22	20.88	16	19.04	31	22.96
Apr. 7	17.87	29	21.57	23	20.77	Sept. 7	23.59
14	18.34	Oct. 6	21.33	30	21.02	14	22.95
21	21.41	13	21.43	Apr. 6	12.41	21	22.41
28	21.97	20	21.64	13	15.83	28	24.08
May 5	20.61	27	18.41	20	19.07	Oct. 5	24.48
12	20.89	Nov. 3	19.21	27	20.98	12	24.52
19	21.63	10	20.41	May 4	21.93	19	24.54
26	22.30	17	21.32	11	21.97	26	24.27
June 2	22.58	24	21.41	18	21.98	Dec. 7	24.77
9	22.77	Dec. 1	21.54	25	22.00	21	23.03
16	23.01	8	21.73	June 1	22.47	28	19.29
23	22.52	15	14.91				

Indiana County

In-1(G7c-0547). Commonwealth of Pennsylvania. Indiana State Teachers College, Indiana. Lat  $40^{\circ}37'00''$ , long  $79^{\circ}09'30''$ . Drilled unused artesian well in sandstone of Conemaugh formation, diam 6 in, depth 200 ft. Lsd, about 1,300 ft above msl. MP, top of casing, 5.00 ft below lsd. Highest water level 73.80 below lsd, Apr. 7, 1953; lowest 92.45 below lsd, Sept. 27, 1952. Records available: 1944-47, 1949-57. Measurements by O. M. Davis.

Jan. 3, 1956	79.1	May 19, 1956	76.65	Oct. 6, 1956	79.25	Mar. 2, 1957	76.9
9	79.4	26	77.37	13	79.3	9	76.8
14	79.75	June 2	77.75	20	79.68	16	77.35
21	80.2	9	78.05	27	79.95	23	77.4
28	80.3	16	78.7	Nov. 3	80.48	30	77.4
Feb. 4	79.32	23	78.69	10	80.64	Apr. 6	75.8
11	78.35	30	78.26	17	81.2	13	76.2
18	77.6	July 7	78.15	Dec. 1	81.5	19	76.4
25	77.2	14	78.3	8	81.9	27	76.1
Mar. 3	77.48	21	77.71	15	80.75	May 4	76.7
10	77.4	28	77.15	22	79.7	11	77.6
19	77.15	Aug. 4	77.55	29	78.6	17	77.93
24	76.77	11	77.09	Jan. 5, 1957	78.6	25	78.4
31	76.54	18	77.49	12	78.55	June 1	78.7
Apr. 7	76.0	25	78.25	19	78.75	8	79.2
14	76.45	Sept. 1	78.72	26	78.1	15	79.35
21	76.95	8	78.8	Feb. 2	77.75	22	79.65
28	76.7	15	78.33	9	76.6	28	79.24
May 5	76.85	22	78.65	16	76.7	July 5	79.2
12	76.6	29	79.0	23	77.2	15	79.1

## In-1(G7c-0547)--Continued.

	Date	Water level	Date	Water level	Date	Water level	Date	Water level
July	19, 1957	79.2	Aug. 30, 1957	81.35	Oct. 11, 1957	82.28	Nov. 22, 1957	82.85
	26	79.6	Sept. 6	81.55	18	82.4	29	82.7
Aug.	2	79.9	13	81.85	25	82.6	Dec. 6	82.5
	9	80.25	20	82.0	Nov. 1	82.6	13	82.1
	16	80.56	27	82.1	8	82.45	30	80.1
	23	81.0	Oct. 7	82.0	15	82.75		

Lycoming County

Ly-1(D13b-2229). Commonwealth of Pennsylvania. Tiadaghton State Forest. Lat  $41^{\circ}28'00''$ , long  $77^{\circ}33'50''$ . Drilled unused water-table well in sandstone of Pottsville or Pocono formation, diam 4 in, depth 74 ft. Lsd, about 2,070 ft above msl. MP, top of casing, 6.00 ft below lsd. Highest water level 16.97 below lsd, Dec. 11, 1950; lowest 30.77 below lsd, Aug. 12, 1957. Records available: 1949-57. Measurements by George B. Will.

Jan.	9, 1956	25.91	June 11, 1956	25.60	Nov. 12, 1956	25.73	Apr. 15, 1957	22.54
	16	25.81	20	25.76	19	25.79	22	22.47
	24	26.18	25	26.21	26	26.06	30	21.49
	30	26.37	July 2	26.89	Dec. 3	27.59	May 6	22.21
Feb.	6	26.65	10	27.20	10	27.20	13	23.11
	14	26.70	16	27.45	17	26.43	22	25.28
	21	26.61	24	27.45	26	23.90	28	25.29
	27	26.37	30	28.65	Jan. 2, 1957	23.31	June 4	26.14
Mar.	5	25.30	Aug. 5	27.18	7	23.63	10	26.82
	12	23.05	14	26.74	14	25.11	17	27.96
	19	21.72	20	26.90	21	25.94	24	28.12
	26	22.71	29	27.39	28	25.35	July 1	28.71
Apr.	2	23.46	Sept. 4	27.95	Feb. 4	25.12	8	28.85
	12	20.46	10	26.95	13	26.03	17	29.09
	17	20.46	17	26.00	20	26.07	22	29.47
	23	21.50	24	26.72	25	26.76	30	29.85
May	2	22.98	Oct. 1	27.42	Mar. 4	25.61	Aug. 5	30.37
	7	23.37	9	27.32	11	25.33	12	30.77
	15	23.02	15	27.49	18	25.43	20	30.42
	21	22.48	22	29.02	25	24.46	26	30.51
	29	24.20	30	27.40	Apr. 2	24.93	Sept. 4	30.75
June	6	24.80	Nov. 5	26.50	8	23.60	Dec. 23	30.37

Mifflin County

Mf-1(G13b-3237). Charles C. Naginey. Village of Naginey. Lat  $40^{\circ}42'10''$ , long  $77^{\circ}33'10''$ . Dug unused water-table well in limestone of Cambrian or Ordovician age, diam 36 in, depth 28 ft, cased with stone. Lsd, about 680 ft above msl. MP, top of wooden cover, at lsd. Highest water level 5.88 below lsd, Dec. 4, 1950; lowest 23.77 below lsd, Nov. 16, 1953. Records available: 1941-57.

Jan.	9, 1956	21.18	Apr. 16, 1956	16.72	Oct. 30, 1956	18.71	Oct. 7, 1957	23.40
	16	21.12	23	17.84	Nov. 5	10.22	14	23.4
	23	23.16	May 8	16.18	26	18.40	22	22.8
	30	20.56	15	15.06	Jan. 4, 1957	17.56	29	22.9
Feb.	7	19.62	21	16.42	11	18.66	Nov. 4	23.5
	13	16.56	28	17.74	18	19.27	12	22.9
	21	16.82	June 4	18.03	25	17.42	18	21.75
	27	16.83	11	18.66	Feb. 2	18.04	28	22.8
Mar.	5	17.39	25	16.16	8	17.15	Dec. 2	23.6
	12	14.94	July 9	22.40	16	18.22	10	19.8
	19	16.58	Oct. 1	19.08	23	18.61	16	21.2
	26	16.84	15	19.64	Mar. 9	17.57	24	16.00
Apr.	2	17.57	23	19.82	July 9	22.40	31	15.70
	11	15.77						

Montgomery County

Mg-44(J22d-1530). Pittsburgh Screw and Bolt Co. Near Conshohocken. Lat  $40^{\circ}06'08''$ , long  $75^{\circ}18'59''$ . Drilled unused artesian well in Stockton formation, diam 6 in, depth 74 ft. Lsd, about 100 ft above msl. MP, top of recorder shelter platform, 3.55 ft above lsd. Highest water level 32.08 below lsd, Dec. 16, 1953 (previously reported as 32.1 below lsd, Dec. 17, 1953); lowest 48.1 below lsd, Nov. 1, 2, 1957. Records available: 1953-57.

## PENNSYLVANIA, PERRY COUNTY

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Mg-44(J22d-1530)--Continued.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	42.0	e39.3	....	34.4	....	....	40.3	43.0	44.8	45.5	....	44.7
10	42.2	37.2	36.6	e33.3	....	....	40.7	43.1	44.9	45.6	....	45.0
15	41.1	....	34.8	....	....	h39.3	41.3	h43.4	45.1	45.8	....	43.1
20	41.7	36.5	33.6	....	38.5	39.7	42.0	43.9	45.3	45.8	....	41.1
25	42.1	37.0	32.4	....	....	39.6	41.2	43.9	45.3	....	....	41.4
Eom	41.4	....	33.4	....	....	40.2	42.1	44.5	45.1	....	....	41.8

1957

5	42.6	43.8	42.7	42.3	42.6	45.1	45.9	47.1	47.8	47.9	47.4	47.2
10	43.5	43.3	42.1	39.2	43.5	45.2	46.2	47.2	47.9	47.6	47.5	44.2
15	44.1	42.5	42.2	40.1	43.9	45.3	46.4	47.4	47.1	47.9	47.9	44.7
20	44.6	43.2	42.4	40.9	44.3	45.0	46.7	....	47.1	47.6	46.6	45.4
25	44.0	44.0	43.1	41.3	44.5	45.4	46.9	47.5	47.0	47.7	46.6	42.8
Eom	44.2	43.5	43.5	41.7	44.8	45.6	47.0	47.5	47.5	48.0	47.2	41.8

e Estimated.

h Tape measurement.

Mg-83(J22b-0045). Lansdale Forest Products Co. Lansdale. Lat  $40^{\circ}14'58''$ , long  $75^{\circ}17'27''$ . Drilled unused artesian well in Brunswick shale, diam 8 in, depth 425 ft. Lsd, about 330 ft above msl. MP, top of concrete floor, 0.50 ft above lsd. Highest water level 71.1 below lsd, July 6, 1954; lowest 120.0 below lsd, Dec. 14, 1957. Records available: 1953-57.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	....	....	82.0	....	....	84.7	86.1	87.1	109.3	110.6	113.1	112.9
10	....	....	102.5	81.5	....	84.8	86.2	86.5	110.8	112.8	111.7	112.9
15	....	....	86.0	....	....	85.4	87.0	87.5	108.5	112.7	110.7	108.8
20	....	....	84.2	....	84.3	84.2	87.2	89.1	113.2	112.5	112.9	105.3
25	....	....	83.4	....	84.7	86.4	86.3	93.9	113.2	113.4	108.7	89.1
Eom	....	....	82.7	....	84.7	87.0	86.7	110.7	107.9	113.3	112.9	87.7

1957

5	87.2	85.6	87.3	84.0	80.5	....	88.7	....	....	....	....	....
10	86.9	86.0	88.8	83.1	82.6	....	....	....	....	....	....	....
15	85.8	86.9	86.1	81.2	81.9	....	....	....	....	....	....	119.9
20	85.4	87.1	....	82.1	82.2	86.1	95.5	....	110.6	114.1	....	119.6
25	85.5	87.2	....	81.6	....	....	....	105.2	....	....	....	119.0
Eom	85.7	87.5	84.0	81.9	....	87.5	....	....	113.7	....	....	....

Perry County

Pe-2(H15a-1461). Bertha Demaree. 29 North 3d St., Newport. Lat  $40^{\circ}28'40''$ , long  $77^{\circ}08'00''$ . Dug unused water-table well in sandstone of Chemung formation, diam 36 in, depth 20 ft, cased with stone. Lsd, about 400 ft above msl. MP, top of wooden cover, at lsd. Highest water level 7.18 below lsd, Apr. 27, 1940; lowest 18.19 below lsd, May 28, 1943. Records available: 1931-57. Measurements by Mrs. Frances K. Fry.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7, 1956	15.86	May 26, 1956	13.87	Oct. 14, 1956	15.43	Mar. 3, 1957	13.36
14	15.92	June 3	13.55	21	15.55	10	13.02
21	16.01	10	14.15	28	14.81	17	13.02
28	16.06	17	14.47	Nov. 4	14.65	24	13.11
Feb. 4	15.98	24	13.58	11	14.62	31	13.36
11	15.74	July 1	14.50	18	14.45	Apr. 7	12.21
18	15.39	8	14.33	24	14.30	14	11.13
25	15.49	15	14.48	Dec. 1	14.70	21	11.56
Mar. 3	15.38	22	13.79	8	14.74	27	11.55
10	14.87	29	14.13	15	14.02	May 5	12.37
17	14.51	Aug. 5	13.31	22	13.78	12	12.73
24	14.21	12	14.10	29	13.57	19	13.21
31	13.80	19	14.17	Jan. 6, 1957	13.77	26	13.57
Apr. 7	14.72	26	14.39	13	13.82	June 2	13.88
14	13.20	Sept. 2	14.45	20	14.22	9	14.04
21	13.31	8	14.67	27	14.19	16	14.01
28	13.43	17	14.72	Feb. 3	14.12	23	14.45
May 5	13.50	23	15.02	10	13.82	30	13.82
12	13.24	30	15.05	17	13.60	July 7	14.44
19	13.56	Oct. 7	15.05	24	13.89	14	14.58

**Pe-2(H15a-1461)--Continued.**

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 21, 1957	14.76	Sept. 1, 1957	15.82	Oct. 13, 1957	16.67	Nov. 24, 1957	16.51
28	14.91	8	16.20	21	16.77	30	16.70
Aug. 4	15.35	15	16.28	28	16.62	Dec. 8	16.90
11	15.56	22	16.32	Nov. 4	16.90	16	17.02
18	15.75	29	16.40	10	16.77	23	16.95
25	15.80	Oct. 6	16.62	17	16.59	29	15.87

## Philadelphia County

Ph-12(K23a-7241). U. S. Naval Base. Barracks and East 4th St. NW., Philadelphia. Lat 39°53'40", long 75°10'20". Drilled observation artesian well in sand of Cretaceous age ("middle" aquifer), diam 8 in., depth 110 ft, cased to 94, screened 94-104. MP, top of casing, 1.80 ft above lsd. Highest water level 23.9 below lsd, May 31, 1953; lowest 39.6 below lsd, July 20, 1955. Records available: 1944-57. Affected by pumping of well 1,100 ft distant. Mean daily range of fluctuation caused by tidal loading, 0.2 ft.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	34.7	....	34.2	34.6	b34.6	35.2	....	34.2	35.0	34.3	33.6	34.0
10	....	34.7	34.8	....	35.2	33.7	....	35.1	34.0	34.4	33.4	33.3
15	....	34.6	34.8	....	35.1	35.6	33.8	35.2	33.7	33.9	33.9	33.9
20	....	33.7	34.6	....	34.6	35.2	35.5	....	34.5	34.0	34.0	33.8
25	....	35.0	34.2	....	35.8	33.6	35.3	34.8	34.2	....	32.6	31.9
Eom	....	....	34.3	....	33.6	34.2	b35.1	35.6	33.0	34.0	33.8	32.0

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	1951											
	33.0	33.4	33.8	31.3	29.4	30.6	31.4	...	...	31.6	...	32.3
5	33.6	33.0	31.3	31.6	30.7	31.2	31.5	...	...	32.3	...	31.2
10	33.3	33.9	32.8	31.1	30.4	31.5	31.5	...	...	31.7	32.6	32.2
15	33.7	34.1	...	31.2	30.2	...	32.2	33.2	32.1	31.8	31.9	32.6
20	33.9	33.8	...	31.5	30.9	31.5	...	...	32.0	31.1	31.8	31.3
25	Eom	33.7	34.0	31.2	30.4	30.0	31.0	...	31.4	...	30.6	31.4

e Estimated.

b Tape measurement.

Ph-20(K23a-7737). U. S. Naval Base. Philip and West 3d Sts. NE., Philadelphia. Lat 39°53'N, long 75°10'W. Drilled observation artesian well in sand and gravel of Cretaceous age ("lower" aquifer), diam 8 in, depth 269 ft (19 ft into rock), cased to 238, screened 238-243. Lsd, 13 ft above msl. MP, top of casing, 3.20 ft above lsd. Highest water level 28.17 below lsd, Nov. 25, 1950; lowest 63.7 below lsd, July 29, 1955. Records available: 1946-57. Affected by tidal loading, 1.7 ft.

Lowest water level on 5th, 10th, 15th, 20th, 25th, and end of month from recorder graph, 1956

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	59.5	55.4	58.2	59.3	56.7	60.8	....	54.8	60.3	57.2	54.6	53.0
10	58.0	60.3	59.0	58.5	58.5	55.5	....	58.0	57.0	53.2	52.8	
15	56.1	59.8	58.7	54.8	59.6	61.9	....	53.2	55.7	56.1	53.0	
20	57.6	59.6	59.1	58.7	55.6	....	....	53.9	57.7	56.2	52.5	
25	58.5	58.6	56.9	57.9	57.1	....	....	....	57.0	48.7	48.1	
Eom	59.7	60.0	57.8	57.1	59.4	60.5	b59.9	b60.4	54.0	57.0	56.3	49.0

195

	1951												
	50.7	52.1	56.7	52.2	39.8	51.5	52.8	55.7	54.7	53.1	54.8	53.8	
5	54.2	55.7	43.2	52.4	51.7	50.6	56.0	55.5	53.7	55.3	46.2	47.2	
10	53.6	57.9	55.3	45.5	50.5	56.0	55.2	56.0	53.0	53.5	53.1	51.2	
15	52.0	58.0	53.2	39.3	47.5	57.6	51.0	55.4	55.9	48.2	49.5	56.5	
20	58.5	58.3	61.9	50.8	51.8	54.9	57.4	53.3	55.7	56.6	53.0	43.9	
25	Eom	57.3	58.8	44.0	49.3	44.2	48.8	50.0	53.7	52.7	57.0	44.2	49.4

## **h Tape measurement**

## Schuylkill County

Sc-1(G18c-5864). Nick C. Donofrio. Pine Grove. Lat 40°32'30", long 76°22'40". Dug domestic water-table well in shale of Portage group, diam 36 in, depth 31 ft, cased with stone. Lsd, about 560 ft above msl. MP, top of wooden cover, at lsd. Highest water level 4.14 below lsd, Aug. 31, 1940; dry, Nov. 5, 1944. Records available: 1931-57.

## Sc-1(G18c-5864)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7, 1956	21.00	July 7, 1956	15.07	Jan. 5, 1957	15.68	July 6, 1957	21.17
14	19.20	14	14.58	12	16.10	13	21.68
21	20.00	21	16.47	19	14.17	20	22.38
28	20.07	28	18.38	26	11.90	29	23.17
Feb. 4	20.80	Aug. 4	20.70	Feb. 2	15.00	Aug. 3	24.00
11	17.59	11	19.76	9	11.99	10	23.40
18	12.80	18	20.00	16	13.99	17	23.80
25	14.47	25	20.46	23	14.96	24	24.00
Mar. 3	14.00	Sept. 1	21.40	Mar. 2	13.40	Sept. 3	24.60
10	13.10	8	21.07	9	14.00	7	24.37
17	13.00	15	21.57	16	12.09	14	24.87
24	12.27	22	21.27	23	13.70	21	25.00
31	15.06	29	21.50	30	15.28	28	25.10
Apr. 7	14.06	Oct. 6	21.18	Apr. 6	12.20	Oct. 5	25.70
14	15.00	13	20.70	13	14.00	12	25.27
21	16.17	20	21.47	20	15.27	19	25.90
28	16.70	27	16.00	27	14.90	26	25.40
May 5	14.60	Nov. 3	12.17	May 4	15.70	Nov. 2	26.20
12	12.87	10	13.87	11	17.27	9	26.00
19	14.70	17	15.68	18	17.43	16	23.99
28	15.96	24	17.17	25	17.36	23	23.30
June 2	17.00	Dec. 1	16.40	June 1	18.58	30	24.00
9	17.27	8	17.00	8	18.69	7	13.19
16	17.90	15	12.18	15	19.70	14	10.00
23	16.60	23	13.97	22	20.47	21	9.00
30	16.00	29	14.16	29	20.20	28	7.20

Sc-4(G19a-7963). Paul Fritz. Adamsdale. Lat 40°38'00", long 76°07'40". Dug unused water-table well in shale of Portage group or Hamilton formation, diam 5 ft, depth 19 ft. Lsd, about 500 ft above msl. MP, top of board, at lsd. Highest water level 2.07 below lsd, Oct. 9, 1950; lowest 13.40 below lsd, Apr. 15, 1955. Records available: 1948-57.

Jan. 11, 1956	7.60	June 27, 1956	6.85	Jan. 28, 1957	4.01	July 23, 1957	9.09
Feb. 14	3.20	Aug. 27	7.33	Feb. 19	4.26	Aug. 23	11.94
Mar. 6	4.09	Sept. 26	5.42	Mar. 25	4.05	Sept. 26	12.72
Apr. 4	4.24	Oct. 24	3.09	Apr. 30	4.69	Nov. 19	3.75
May 3	3.61	Nov. 26	4.85	June 25	7.77	Dec. 19	4.01
June 1	6.06	Dec. 26	3.14				

Sc-5(G19d-1216). George Mengle. Near Auburn. Lat 40°36'20", long 76°05'30". Dug unused water-table well in Marcellus shale, diam 36 in, depth 34 ft. Lsd, about 490 ft above msl. MP, top of capped pipe, 0.60 ft above lsd. Highest water level 23.48 below lsd, Feb. 4, 1952; lowest 29.54 below lsd, Nov. 22, 1954. Records available: 1946-57.

Jan. 11, 1956	26.63	June 27, 1956	26.79	Jan. 28, 1957	25.89	July 23, 1957	28.22
Feb. 14	27.47	Aug. 27	27.68	Feb. 19	25.85	Aug. 23	28.83
Mar. 6	26.84	Sept. 26	28.11	Mar. 25	25.55	Sept. 26	29.46
Apr. 4	25.51	Oct. 24	26.98	Apr. 30	24.97	Nov. 19	29.52
May 3	25.74	Nov. 26	26.28	May 27	26.24	Dec. 19	28.92
June 1	26.24	Dec. 26	24.99				

## Somerset County

So-2(J7c-8404). Commonwealth of Pennsylvania. Laurel Hill Recreational Area. Bakersville. Lat 40°00'00", long 79°14'20". Drilled unused artesian well in sandstone of Pottsville formation, diam 4 to 6 in, depth 450 ft, cased to 311. Lsd, 2,040 ft above msl. MP, top of casing, 3.00 ft above lsd. Highest water level 29.35 below lsd, May 3, 1948; lowest 35.97 below lsd, Aug. 21, 1937. Records available: 1937-57. Measurements by Fred W. Eakin.

Jan. 6, 1956	32.15	Apr. 17, 1956	30.70	July 24, 1956	31.01	Nov. 20, 1956	31.46
12	32.09	25	30.83	Aug. 1	31.21	27	31.38
19	32.10	May 1	30.80	17	31.25	Dec. 11	30.9
27	32.17	8	30.73	31	31.27	19	31.18
Feb. 8	31.98	16	30.50	Sept. 7	31.29	Jan. 8, 1957	31.24
23	31.67	23	30.54	12	31.58	16	31.18
Mar. 1	31.50	31	30.44	21	30.99	31	34.00
7	31.23	June 5	30.50	25	31.0	Feb. 6	30.52
13	31.35	14	30.58	Oct. 2	31.56	19	31.03
19	31.12	21	30.66	9	31.17	26	30.88
27	31.0	28	30.63	16	31.47	Mar. 5	30.98
Apr. 4	30.7	July 11	30.80	30	31.42	14	30.25
11	30.77	17	30.92	Nov. 7	31.37	26	30.89

## So-2(J7c-8404)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 24, 1957	30.29	June 6, 1957	30.63	July 19, 1957	30.84	Sept. 26, 1957	32.31
May 3	30.76	18	30.70	Aug. 14	31.40	Oct. 3	32.47
9	30.82	26	30.59	20	31.60	Nov. 1	32.92
15	30.31	July 10	30.53	28	31.90	27	32.60
29	30.72						

Sullivan County

Su-1(C17d-8117). Carl D. Molyneux. Near Forksville. Lat  $41^{\circ}30'20''$ , long  $76^{\circ}35'20''$ . Dug unused water-table well in sand and gravel of Pleistocene age, diam 4 ft, depth 28 ft, cased with stone. Lsd, about 1,280 ft above msl. MP, top of wooden cover, at lsd. Highest water level 18.11 below lsd, Dec. 2, 1950; dry several times 1935-57. Records available: 1935-57.

Jan. 7, 1956	26.45	July 21, 1956	26.16	Jan. 12, 1957	25.57	July 13, 1957	26.92
14	26.33	27	23.44	19	25.94	20	f28.0
21	26.44	Aug. 4	24.58	26	23.66	27	(f)
28	26.48	11	24.33	Feb. 2	24.39	Aug. 3	(f)
Feb. 4	26.39	18	24.95	9	24.59	10	(f)
11	24.77	25	25.13	14	24.74	17	(f)
18	23.54	Sept. 1	25.38	Mar. 2	22.22	24	(f)
25	24.08	8	25.09	9	23.18	31	(f)
Mar. 3	23.33	15	25.26	16	22.65	Sept. 7	(f)
24	24.79	22	25.15	23	23.26	14	(f)
31	23.14	29	24.73	30	24.11	21	(f)
Apr. 7	22.84	Oct. 6	25.41	Apr. 6	20.68	30	(f)
14	23.74	13	25.96	13	22.07	Oct. 5	(f)
21	24.11	20	26.41	20	23.54	12	(f)
28	24.68	27	24.54	27	23.63	19	(f)
May 5	24.86	Nov. 5	19.96	May 4	24.37	26	(f)
12	25.52	10	23.38	11	25.58	Nov. 2	(f)
19	25.59	17	24.46	18	26.42	9	(f)
26	25.88	24	25.13	25	26.36	16	(f)
June 2	26.23	Dec. 1	25.58	June 1	26.44	23	25.58
9	26.41	8	25.75	8	26.48	30	25.72
16	26.44	15	24.84	15	25.91	Dec. 7	25.96
23	26.69	22	24.65	22	26.84	14	26.38
30	26.63	29	24.92	29	26.52	21	22.33
July 7	26.51	Jan. 5, 1957	25.22	July 6	26.75	28	21.84
14	26.64						

f Dry.

Susquehanna County

Sq-1(B20c-2461). Carlton farm. Montrose. Lat  $41^{\circ}50'20''$ , long  $75^{\circ}52'50''$ . Dug unused water-table well in drift of Pleistocene age, diam 36 in, depth 38 ft, cased with stone. Lsd, about 1,685 ft above msl. MP, top of brass plate at 3-in hole, 1.10 ft above lsd. Highest water level 0.70 below lsd, Mar. 18, 1936; lowest 9.41 below lsd, Nov. 9, 1953. Records available: 1930-57.

Jan. 8, 1956	7.56	May 28, 1956	6.61	Oct. 15, 1956	5.32	Feb. 25, 1957	7.69
15	6.37	June 4	7.04	22	6.23	Mar. 4	6.9
22	6.69	11	6.36	29	6.56	11	6.17
29	7.36	18	7.08	Nov. 5	6.90	18	4.86
Feb. 5	7.98	25	8.09	12	7.22	25	4.80
12	7.47	July 2	8.35	19	7.70	Apr. 2	3.20
19	6.37	9	8.38	26	8.80	8	3.00
26	5.03	16	8.27	Dec. 3	8.43	15	3.20
Mar. 4	3.35	23	7.9	10	7.29	21	4.24
11	3.30	30	6.37	17	6.58	28	4.68
18	3.27	Aug. 7	6.34	24	4.04	May 6	5.48
25	3.42	13	7.02	31	4.35	13	7.47
Apr. 1	3.49	20	8.16	Jan. 2, 1957	4.57	20	7.62
8	3.60	27	8.27	8	5.68	27	7.40
15	3.65	Sept. 3	7.55	15	6.10	June 3	6.97
22	3.80	10	6.34	22	7.00	10	7.98
29	3.95	17	5.40	28	6.95	17	8.28
May 7	4.40	24	4.22	Feb. 4	6.70	24	8.02
14	4.64	Oct. 1	4.60	11	6.00	July 1	7.91
21	5.61	8	5.06	18	7.14	8	7.55

## Sq-1(B20c-2461)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 15, 1957	7.42	Aug. 26, 1957	7.9	Oct. 8, 1957	6.39	Nov. 19, 1957	6.9
22	7.49	Sept. 4	7.02	14	6.47	27	5.97
29	7.90	9	6.96	21	6.42	Dec. 16	5.9
Aug. 5	8.35	16	6.50	31	6.33	27	3.34
12	8.62	23	6.41	Nov. 5	6.29	30	4.06
19	8.80	30	6.39	12	6.34		

Tioga County

Ti-1(B13d-8436). Lewis Robert Kohler. Gaines. Lat  $41^{\circ}45'00''$ , long  $77^{\circ}33'30''$ . Dug domestic water-table well in sand of Pleistocene age, diam 4 ft, depth 23 ft, cased with stone. Lsd, about 1,290 ft above msl. MP, top of wooden cover, 3.80 ft above lsd. Highest water level 4.65 below lsd, Mar. 21, 1936; lowest 21.18 below lsd, Sept. 16, 1939. Records available: 1935-57.

Jan. 7, 1956	18.17	July 7, 1956	13.72	Jan. 5, 1957	10.03	July 6, 1957	17.24
14	17.88	14	14.50	12	12.80	13	17.14
21	18.35	21	13.73	19	15.85	20	17.00
28	18.77	28	13.48	26	7.74	27	18.5
Feb. 4	18.84	Aug. 4	15.28	Feb. 2	9.87	Aug. 3	19.2
11	18.05	11	13.36	9	9.74	10	18.5
18	17.02	18	14.84	16	9.85	17	18.2
25	12.82	25	15.76	23	10.80	24	18.4
Mar. 3	6.93	Sept. 1	15.41	Mar. 2	11.98	31	18.1
10	5.47	8	13.55	9	12.10	Sept. 7	17.9
17	6.15	15	13.99	16	6.48	14	17.6
24	6.78	22	12.00	23	8.23	21	17.7
31	6.22	29	12.87	30	8.40	28	18.9
Apr. 7	5.60	Oct. 6	14.48	Apr. 6	5.18	Oct. 4	19.3
14	6.34	13	16.17	13	5.65	11	19.7
21	7.23	20	17.35	20	6.33	18	20.0
28	9.37	27	16.77	27	6.23	25	19.9
May 5	10.39	Nov. 3	11.81	May 4	7.53	Nov. 1	19.8
12	6.91	10	11.88	11	11.16	8	20.2
19	7.37	17	12.39	18	11.64	15	20.1
26	10.13	24	13.59	25	9.85	22	19.4
June 2	12.59	Dec. 1	14.52	June 1	12.02	29	19.5
9	14.96	8	15.13	8	15.45	Dec. 6	19.9
16	16.94	15	8.00	15	16.23	13	18.7
23	14.65	22	6.94	22	17.80	20	18.0
30	14.96	29	7.30	29	17.74	27	9.9

Union County

Un-1(F15a-8127). D. R. Pursley. Laurelton. Lat  $40^{\circ}52'50''$ , long  $77^{\circ}51'50''$ . Dug unused water-table well in shale or limestone of Cayuga group, diam 5 ft, depth 13 ft. Lsd, about 655 ft above msl. MP, top of concrete enclosure, 2.00 ft above lsd. Highest water level 2.00 below lsd, Nov. 2, 1956; lowest 9.18 below lsd, Oct. 26, 1951. Records available: 1946-57.

Jan. 6, 1956	6.91	May 18, 1956	4.20	Sept. 28, 1956	4.55	Feb. 8, 1957	4.46
13	6.92	24	4.18	Oct. 5	4.94	15	4.45
20	6.93	June 1	4.47	12	4.95	22	4.49
27	6.93	8	4.49	19	5.00	Mar. 8	4.60
Feb. 3	6.94	15	4.54	26	4.95	15	4.65
10	6.93	22	4.65	Nov. 2	2.00	28	4.00
17	6.90	30	5.00	9	3.09	Apr. 5	2.90
23	4.49	July 6	4.25	17	3.10	12	3.89
Mar. 2	4.49	13	5.27	24	3.15	26	4.17
9	4.55	20	5.10	30	3.16	May 4	4.13
16	4.56	Aug. 4	5.10	Dec. 8	3.25	10	4.15
30	4.36	11	5.15	14	3.05	14	4.15
Apr. 6	4.55	17	5.05	21	4.02	24	4.22
13	4.65	24	5.07	28	4.00	31	5.00
20	3.70	31	4.55	Jan. 11, 1957	4.54	June 7	5.00
27	4.22	Sept. 7	4.66	18	4.50	14	4.69
May 4	4.24	14	4.68	25	4.55	21	4.65
12	4.15	21	4.54	Feb. 2	4.55	28	6.96

## Un-1(F15a-8127)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 5, 1957	6.97	Aug. 23, 1957	8.2	Oct. 11, 1957	7.7	Nov. 22, 1957	5.4
12	6.98	30	8.4	19	7.4	29	5.7
19	6.99	Sept. 6	8.5	25	7.3	Dec. 6	6.0
26	6.98	13	8.2	Nov. 1	7.5	13	5.3
Aug. 2	7.5	20	7.4	8	7.7	20	4.6
9	7.8	27	7.6	15	6.9	.27	3.4
16	8.1	Oct. 4	7.9				

Washington County

Ws-1(J3c-5924). Albert Mankey. Amity. Lat  $40^{\circ}02'20''$ , long  $80^{\circ}12'10''$ . Dug unused water-table well in limestone of Washington formation, diam 40 in, depth 36 ft, cased with stone to 4. Lsd, about 1,190 ft above msl. MP, top of brass plate under trap door, 0.70 ft above lsd. Highest water level 8.39 below lsd, June 22, 1946; lowest 34.14 below lsd, Oct. 1, 1938. Records available: 1936-57. Measurements by William Mankey.

Jan. 25, 1956	24.01	Aug. 25, 1956	18.24	June 15, 1957	22.81	Sept. 28, 1957	32.87
Feb. 13	16.96	Sept. 24	22.51	21	22.83	Oct. 5	32.89
27	14.06	Oct. 10	25.59	29	25.82	12	32.90
Mar. 13	14.66	22	28.46	July 6	26.89	19	30.86
31	10.71	Nov. 8	29.13	13	28.89	26	31.86
Apr. 23	21.59	25	28.67	20	28.87	Nov. 2	31.89
May 5	16.27	Mar. 4, 1957	15.23	27	29.84	9	32.84
23	20.98	Apr. 16	15.31	Aug. 3	32.81	16	33.81
June 4	20.06	26	12.83	10	33.81	23	32.86
11	22.95	May 4	12.85	17	33.81	31	32.81
27	16.31	10	18.81	23	33.81	Dec. 7	28.89
July 10	15.53	17	18.82	31	32.90	14	28.86
16	19.64	23	21.26	Sept. 7	32.81	21	27.90
24	21.57	31	18.90	14	32.88	28	22.81
Aug. 7	10.44	June 7	20.87	21	32.84		

Wayne County

Wn-1(D23a-0933). Arthur H. Tyce. Near Hawley. Lat  $41^{\circ}29'10''$ , long  $75^{\circ}11'10''$ . Dug unused water-table well in sand and gravel of Pleistocene age, diam 30 in, depth 17 ft, cased with stone. Lsd, about 920 ft above msl. MP, mark on edge of stone cover, 0.87 ft above lsd. Highest water level 2.08 below lsd, May 23, 1942; dry several times, 1941, 1953, 1954, 1956. Records available: 1931-42, 1944-57.

Jan. 7, 1956	10.80	July 7, 1956	10.31	Jan. 5, 1957	12.15	July 13, 1957	13.80
14	10.31	14	10.80	12	12.32	20	14.24
21	11.34	21	11.14	19	12.44	27	13.63
28	11.90	29	11.60	26	12.25	Aug. 3	13.63
Feb. 4	11.80	Aug. 4	11.86	Feb. 2	12.47	10	13.63
11	11.70	11	12.42	9	11.49	17	13.63
18	11.11	18	13.20	16	11.78	24	13.48
25	10.78	25	14.30	24	12.15	31	13.48
Mar. 3	10.62	Sept. 1	14.41	Mar. 2	11.83	Sept. 7	13.48
10	7.26	8	14.81	9	11.55	14	13.48
17	7.25	15	14.90	16	11.65	21	13.17
24	7.72	22	14.74	23	11.66	28	13.17
31	7.61	29	14.82	30	11.18	Oct. 5	13.17
Apr. 7	5.13	Oct. 6	(f)	Apr. 6	8.41	12	13.17
14	7.50	13	(f)	13	5.05	19	13.17
21	5.90	20	(f)	20	6.01	26	13.15
28	6.44	27	(f)	27	7.22	Nov. 2	13.15
May 5	5.06	Nov. 3	(f)	May 4	8.40	9	13.15
12	6.08	10	(f)	11	8.93	16	13.15
19	7.43	17	(f)	18	9.34	23	13.15
26	8.45	24	(f)	25	9.88	30	13.15
June 2	8.75	Dec. 1	(f)	June 1	10.33	Dec. 7	13.15
9	8.62	8	(f)	8	10.72	14	13.15
16	9.00	15	14.36	22	11.64	21	13.11
23	10.00	22	13.29	29	12.09	28	12.15
30	10.15	29	12.69	July 6	12.88		

f Dry.

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## RHODE ISLAND

By W. B. Allen and Karl E. Johnson

The observation-well program was continued during 1956 and 1957 in cooperation with the Rhode Island Water Resources Coordinating Board. Figure 13 shows the location of observation wells whose measurements are included in this report.

### Well-Numbering System

Wells are designated by town names and serial numbers.

### Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum.

#### Kent County

Warwick 39a. U. S. Naval Advance Base Depot, Davisville. Lat  $41^{\circ}38'19''$ , long  $71^{\circ}27'54''$ . Drilled observation water-table well in sand and gravel, diam  $2\frac{1}{2}$  in, depth 45 ft. Lsd, 35.9 ft above msl. MP, top edge of casing, at lsd. Highest water level 9.2 below lsd, Dec. 30, 1956; lowest 39.8 below lsd, Sept. 10, 1944. Records available: 1943-57. Measurements are monthly lows made by Public Works Office. Observation well is 3 ft from centerline of public-supply well, diam 18 in, depth 61 ft. Water levels affected by pumping.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9, 1956	12.5	July 7, 1956	13.7	Jan. 12, 1957	12.1	July 21, 1957	18.2
Feb. 4	11.5	Aug. 12	14.6	Feb. 17	11.7	Aug. 11	24.2
Mar. 29	11.5	Sept. 9	15.8	Mar. 19	12.3	Sept. 7	25.6
Apr. 21	11.2	Oct. 14	12.0	Apr. 13	11.0	Oct. 20	25.4
May 30	12.3	Nov. 3	12.0	May 13	11.4	Nov. 18	25.0
June 24	13.4	Dec. 31	12.9	June 4	15.0	Dec. 7	24.6

West Greenwich 57. Frank Altieri, Division St. Lat  $41^{\circ}38'45''$ , long  $71^{\circ}35'27''$ . Dug unused water-table well in sand, diam 30 in, depth 13 ft. Lsd, 268.10 ft above msl. MP, arrowhead at top of casing, 2.00 ft above lsd. Highest water level 1.37 below lsd, Mar. 29, 1956; lowest 10.30 below lsd, Sept. 27, 1957. Records available: 1952-57.

Jan. 27, 1956	4.04	July 30, 1956	5.78	Jan. 30, 1957	4.92	July 31, 1957	9.04
Feb. 29	2.67	Aug. 29	6.84	Feb. 28	4.21	Aug. 30	9.58
Mar. 29	1.37	Sept. 26	7.10	Mar. 28	4.48	Sept. 27	10.30
Apr. 26	1.87	Oct. 25	6.40	Apr. 30	5.08	Oct. 28	9.78
May 28	3.12	Nov. 27	4.30	May 29	6.65	Nov. 26	8.49
June 27	6.09	Dec. 26	4.13	June 26	8.10	Dec. 31	5.80

#### Newport County

Portsmouth 72. St. Mary's Church, East Main Rd. Lat  $41^{\circ}32'47''$ , long  $71^{\circ}15'42''$ . Dug unused water-table well in till, diam 36 in, depth 42 ft. Lsd, about 235 ft above msl. MP, edge of hole in center of concrete cover (since Dec. 31, 1957), 0.28 ft above lsd. Highest water level 6.96 below lsd, Feb. 20, 1948; lowest 30.79 below lsd, Oct. 29, 1957. Records available: 1947-57.

Jan. 25, 1956	16.21	July 30, 1956	19.37	Jan. 30, 1957	14.55	Aug. 1, 1957	25.30
Feb. 27	13.81	Aug. 29	21.69	Feb. 28	17.42	29	27.17
Mar. 28	13.80	Sept. 26	24.04	Mar. 28	14.15	Sept. 27	29.01
Apr. 26	16.21	Oct. 25	24.85	Apr. 29	17.22	Oct. 29	30.79
May 28	19.03	Nov. 28	23.39	May 27	19.84	Nov. 27	30.06
June 27	20.54	Dec. 27	14.51	June 24	22.19	Dec. 31	21.54

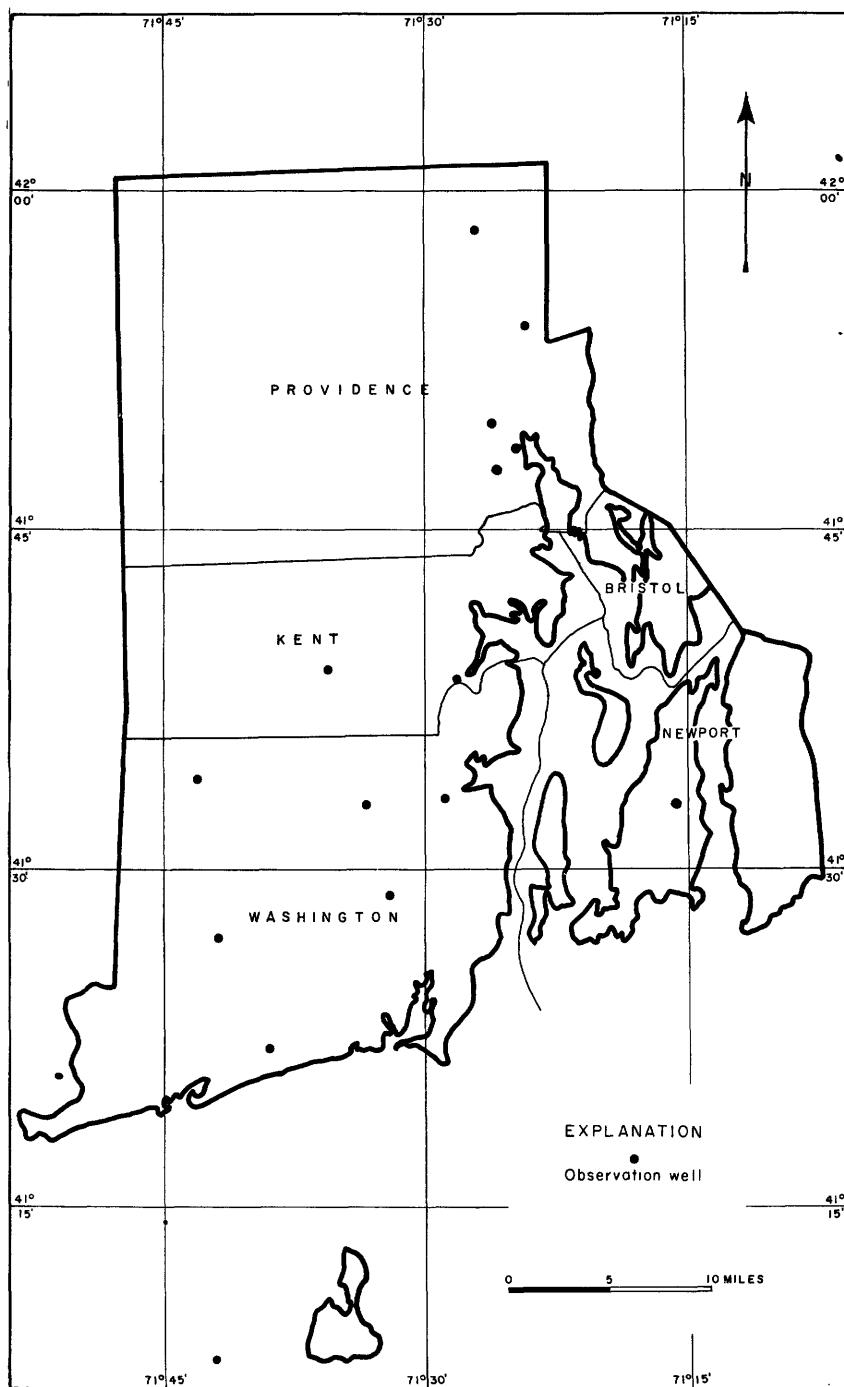


Figure 13. -- Location of observation wells in Rhode Island, 1956-57.

Providence County

Cumberland 129. Thomas Cooney Estate. Lat  $41^{\circ}58'20''$ , long  $71^{\circ}27'14''$ . Dug unused water-table well in till, diam 30 in, depth 30 ft. Lsd, 324.82 ft above msl. MP, arrowhead on top of timber in well shelter, 3.10 ft above lsd. Highest water level 5.35 below lsd, Mar. 28, 1953; lowest 18.28 below lsd, Oct. 28, 1957. Records available: 1946-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25, 1956	8.00	July 30, 1956	12.20	Jan. 30, 1957	7.54	Aug. 1, 1957	15.77
Feb. 27	7.22	Aug. 29	14.50	Feb. 27	7.90	29	17.00
Mar. 28	7.12	Sept. 26	14.80	Mar. 27	6.88	Sept. 26	18.06
Apr. 26	7.48	Oct. 25	12.74	Apr. 29	8.51	Oct. 28	18.28
May 28	9.81	Nov. 27	6.74	May 27	11.04	Nov. 25	13.15
June 27	11.44	Dec. 26	5.77	June 25	13.14	Dec. 31	6.33

Lincoln 84. Lincoln Bleachery & Dye Works. Lonsdale. Lat  $41^{\circ}54'38''$ , long  $71^{\circ}24'24''$ . Driven unused water-table well in sand and gravel, diam 3 in, depth 107 ft. Lsd, about 60 ft above msl. MP, top edge of casing, 2.70 ft below lsd. Highest water level, flood levels, Mar. 20, 1948, Apr. 17, 1953, Sept. 18, 1954, Aug. 20, 1955, Apr. 6, 13, 20, 1956; lowest 7.28 below lsd, Oct. 11, 1957. Records available: 1946-57. Measurements are monthly lows. Water level affected by pumping.

Jan. 27, 1956	5.32	July 20, 1956	6.65	Jan. 18, 1957	6.65	July 26, 1957	6.97
Feb. 24	5.17	Aug. 31	6.92	Feb. 22	5.90	Aug. 30	7.23
Mar. 30	4.36	Sept. 21	6.82	Mar. 8	5.70	Sept. 27	7.28
Apr. 27	4.04	Oct. 19	6.75	Apr. 26	5.47	Oct. 11	7.28
May 25	5.27	Nov. 16	6.89	May 10	6.23	Nov. 1	7.19
June 29	6.28	Dec. 7	6.51	June 28	6.45	Dec. 6	6.89

Providence 48. Gorham Manufacturing Co. Lat  $41^{\circ}47'47''$ , long  $71^{\circ}25'56''$ . Drilled unused water-table well in sand, diam 8 in, depth 121 ft. Lsd, 45.79 ft above msl. MP, top edge of 1-in hole in center of wooden cover, at lsd. Highest water level 5.08 below lsd, Apr. 20, May 4, 1953; lowest 10.20 below lsd, Oct. 20, 1947. Records available: 1944-57. Water level affected by pumping.

Jan. 25, 1956	6.27	July 30, 1956	6.99	Jan. 30, 1957	7.40	Aug. 2, 1957	7.69
Feb. 27	6.10	Aug. 29	7.37	Feb. 27	7.33	30	7.79
Mar. 28	5.30	Sept. 26	7.57	Mar. 27	7.18	Sept. 27	7.93
Apr. 26	5.82	Oct. 25	7.54	May 3	7.85	Oct. 31	8.01
May 28	6.14	Nov. 27	7.39	31	7.13	Nov. 25	8.10
June 27	6.76	Dec. 26	7.21	June 24	7.35		

Providence 113. Providence Young Men's Christian Association. 160 Broad St. Lat  $41^{\circ}49'07''$ , long  $71^{\circ}24'55''$ . Drilled unused water-table well in bedrock, diam 12 in, depth 208 ft. Lsd, 72.12 ft above msl (previously reported as 79.89). MP, east edge of top of casing, 7.77 ft below lsd. Highest water level 44.05 below lsd, May 28, 1956; lowest 49.12 below lsd, Nov. 9, 1945. Records available: 1944-57. Water level affected by tides.

Jan. 25, 1956	44.40	July 30, 1956	44.41	Jan. 30, 1957	44.97	Aug. 2, 1957	44.90
Feb. 27	44.60	Aug. 29	44.50	Feb. 27	44.87	30	44.93
Mar. 28	44.49	Sept. 26	44.69	Mar. 27	45.08	Sept. 27	45.06
Apr. 26	44.20	Oct. 25	44.83	May 3	44.97	Oct. 31	45.11
May 28	44.05	Nov. 27	44.72	31	45.00	Nov. 25	44.99
June 27	44.36	Dec. 26	44.88	June 24	44.96		

Providence 1051. U. S. Rubber Co. Lat  $41^{\circ}49'40''$ , long  $71^{\circ}26'08''$ . Drilled unused water-table well in sand and gravel, diam 8 in, depth 82 ft. Lsd, about 10 ft above msl. MP, arrowhead at top edge of hole in floor of recorder shelter (since Sept. 13, 1957), 1.40 ft above lsd. Highest water level 1.17 below lsd, Sept. 2, 1954 (previously reported 3.90 below lsd, Aug. 31, 1954); lowest 16.10 below lsd, Jan. 16, 1948. Records available: 1948-57. Measurements are weekly lows. Water level affected by pumping.

Jan. 7, 1956	11.24	Apr. 7, 1956	9.73	July 7, 1956	11.24	Oct. 5, 1956	11.40
14	11.78	14	9.45	14	11.55	12	11.56
21	11.65	21	9.77	21	10.03	20	11.84
28	11.51	28	9.87	28	8.55	27	11.73
Feb. 4	11.53	May 5	10.23	Aug. 3	6.05	Nov. 3	11.08
11	11.29	12	10.19	11	7.01	10	11.97
18	11.20	19	10.37	18	9.37	17	12.33
25	10.63	26	10.37	25	10.88	22	12.36
Mar. 3	10.79	June 2	9.71	Sept. 1	11.92	Dec. 1	12.47
10	10.62	9	10.96	8	11.30	8	13.03
17	10.60	16	11.47	15	12.01	15	12.84
24	7.45	23	11.50	22	11.83	22	11.85
31	9.26	30	11.68	29	11.57	29	11.10

## Providence 1051--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5, 1957	10.62	Apr. 6, 1957	12.15	July 5, 1957	12.82	Oct. 5, 1957	13.52
12	11.89	13	11.77	12	13.24	12	13.44
19	11.93	20	11.84	20	8.53	19	13.58
26	11.79	27	11.41	27	8.58	26	13.62
Feb. 2	11.93	May 4	12.41	Aug. 3	10.37	Nov. 2	13.31
9	12.10	11	12.72	10	12.14	9	12.12
16	12.12	18	12.97	17	12.04	16	10.93
23	12.04	25	12.70	24	e15.15	23	11.46
Mar. 2	12.34	June 1	11.73	31	13.34	30	10.74
9	12.35	8	12.84	Sept. 7	12.97	Dec. 7	11.00
16	12.45	15	12.84	14	13.50	14	11.00
23	12.43	22	13.63	21	13.65	21	10.78
30	12.22	29	14.07	28	13.62	28	9.68

e Estimated.

Washington County

## Charlestown 18. U. S. Naval Auxiliary Air Station. Lat 41°22'21", long 71°39'43".

Drilled unused water-table well in sand and clay, diam 8 in, depth 32 ft. Lsd, 26.4 ft above msl. MP, top edge of casing, at lsd. Highest water level 12.79 below lsd, Apr. 25, 1953; lowest 21.43 below lsd, Oct. 28, Nov. 30, 1949. Records available: 1946-57.

Jan. 26, 1956	17.93	Aug. 30, 1956	18.92	Feb. 28, 1957	19.08	Aug. 29, 1957	20.69
Feb. 29	16.03	Sept. 27	19.68	Mar. 27	17.54	Sept. 27	20.90
Mar. 29	15.03	Oct. 26	19.96	Apr. 30	16.29	Oct. 29	21.24
Apr. 27	15.01	Nov. 27	20.22	May 29	17.87	Nov. 25	20.80
May 29	16.56	Dec. 26	18.69	June 26	18.92	Dec. 31	18.14
July 31	18.14	Jan. 31, 1957	18.89	July 31	20.09		

Exeter 6. Wood River Picnic Area. Lat 41°34'23", long 71°43'19". Dug unused water-table well in sand and gravel, diam 30 in, depth 10 ft. Lsd, about 130 ft above msl. MP, arrowhead on east side of opening in concrete cover, at lsd. Highest water level 3.75 below lsd, Nov. 5, 1955 (previously reported as 3.83 below lsd, Nov. 6, 1955); lowest 7.74 below lsd, Sept. 27, 1957. Records available: 1946, 1948-57. Water level influenced by nearby Wood River.

Jan. 26, 1956	5.82	Aug. 31, 1956	7.02	Jan. 30, 1957	5.95	July 31, 1957	7.45
Feb. 29	5.08	Sept. 30	7.23	Feb. 28	5.85	Aug. 30	7.55
Mar. 29	4.70	Oct. 16	7.17	Mar. 27	5.74	Sept. 27	7.74
Apr. 30	4.76	Nov. 20	6.95	Apr. 30	5.59	Oct. 29	7.58
May 31	5.62	Dec. 28	5.99	May 29	6.30	Nov. 25	7.24
June 30	6.35	Jan. 15, 1957	6.27	June 26	6.95	Dec. 30	5.95
July 31	6.55						

Exeter 16. State of Rhode Island. Exeter School. Lat 41°33'07", long 71°32'37". Driven unused water-table well in sand and gravel, diam 2½ in, depth 27 ft. Lsd, 154.47 ft above msl. MP, top of casing, 3.00 ft above lsd. Highest water level 7.38 below lsd, Apr. 15, 1953; lowest 15.40 below lsd, Oct. 30, 1957. Records available: 1946-57. Measurements are monthly lows. Water level affected by pumping.

Jan. 30, 1956	9.84	July 25, 1956	11.42	Jan. 9, 1957	13.54	July 24, 1957	13.23
Feb. 23	9.26	Aug. 22	12.64	Feb. 5	12.81	Aug. 22	14.03
Mar. 22	8.80	Sept. 19	13.50	Mar. 6	12.37	Sept. 18	14.74
Apr. 25	8.14	Oct. 17	14.05	Apr. 3	11.31	Oct. 16	15.27
May 31	9.33	Nov. 14	14.63	May 28	10.86	Nov. 13	15.39
June 29	10.29	Dec. 12	14.50	June 27	12.22	Dec. 11	15.08

North Kingstown 26a. North Kingstown Water Comm. pumping station. Lat 41°33'25", long 71°29'01". Drilled observation water-table well in sand and gravel, diam 8 in, depth 31 ft. Lsd, 58.75 ft above msl. MP, top edge of casing, at lsd. Highest water level 9.40 below lsd, June 1, 1948; lowest 19.3 below lsd, June 18, July 21, 1957. Records available: 1947-57. Measurements, by owner, are monthly lows. Observation well is 4 ft from centerline of public-supply well, diam 12 in, depth 50 ft. Water levels affected by pumping.

Jan. 1, 1956	12.3	July 3, 1956	16.4	Feb. 23, 1957	12.7	July 21, 1957	19.3
Feb. 1	11.8	Aug. 5	14.8	Mar. 22	12.8	Aug. 4	15.8
Mar. 3	12.1	Sept. 13	14.3	Apr. 25	12.8	Sept. 4	13.9
Apr. 5	11.9	Oct. 6	13.0	May 10	15.5	Oct. 4	13.8
May 27	12.3	Dec. 31	12.2	June 18	19.3	Nov. 14	12.9
June 16	15.7	Jan. 22, 1957	12.8	25	17.6	Dec. 8	12.8

## GROUND-WATER LEVELS, 1956-57, NORTHEASTERN STATES

Richmond 231. N. D. MacLeod. Lat  $41^{\circ}27'16''$ , long  $71^{\circ}41'54''$ . Dug unused water-table well in sand and gravel, diam 24 in, depth 28 ft. Lsd, 84 ft above msl. MP, northwest corner of stone slab, at lsd. Highest water level 21.05 below lsd, Apr. 27, 1956; lowest 28.15 below lsd, Nov. 25, 1957. Records available: 1955-57.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 20, 1955	22.75	Jan. 26, 1956	23.14	Sept. 27, 1956	25.28	May 29, 1957	24.45
June 28	23.71	Feb. 29	22.76	Oct. 26	26.01	June 26	25.00
July 28	24.57	Mar. 29	22.14	Nov. 27	26.69	July 31	25.85
Aug. 26	24.55	Apr. 27	21.05	Dec. 26	26.63	Aug. 29	26.55
Sept. 29	24.50	May 29	21.71	Jan. 31, 1957	26.12	Sept. 27	27.15
Oct. 27	23.43	June 28	22.57	Feb. 28	26.02	Oct. 29	27.75
Nov. 28	22.15	July 31	23.58	Mar. 27	25.85	Nov. 25	28.15
Dec. 30	22.56	Aug. 30	24.46	Apr. 30	24.16	Dec. 31	27.40

South Kingstown 6. Rhode Island University. Lat  $41^{\circ}28'50''$ , long  $71^{\circ}32'11''$ . Drilled unused water-table well in sand and gravel, diam 10 in, depth 34 ft. Lsd, 111.89 ft above msl. MP, arrowhead at hole in base of recorder shelter, 0.87 ft above lsd. Highest water level 8.69 below lsd, Apr. 9, 1956; lowest 14.13 below lsd, Oct. 30-Nov. 3, 1957. Records available: 1955-57.

Jan. 31, 1956	11.05	July 31, 1956	12.09	Jan. 31, 1957	12.26	July 31, 1957	13.22
Feb. 29	9.74	Aug. 31	12.93	Feb. 28	12.21	Aug. 31	13.62
Mar. 31	9.23	Sept. 30	13.36	Mar. 31	11.22	Sept. 30	13.98
Apr. 30	9.56	Oct. 31	13.51	Apr. 30	10.40	Oct. 31	14.13
May 31	10.86	Nov. 30	13.44	May 31	11.55	Nov. 30	14.02
June 30	11.87	Dec. 31	12.59	June 30	12.50	Dec. 31	13.10

## References

Allen, W. B., and Lang, S. M., 1957, Ground-water levels in Rhode Island, 1956: Rhode Island Water Resources Coordinating Board Hydrol. Bull. No. 1.